Public Health Preparedness and Response for Bioterrorism

2002 Emergency Supplemental

Missouri
Department of Health
& Senior Services

dhss
MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES

Public Health Preparedness and Response for Terrorism Program Application

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CRITICAL BENCHMARKS

1. Designate a senior public health official within the state/local health department to serve as executive director of the bioterrorism preparedness and response program.

The Missouri Department of Health and Senior Services has designated Susan Jenkins, director of the Center for Emergency Response/Terrorism, to serve as executive director of the CDC Bioterrorism Preparedness and Response program and as coordinator for the HRSA Hospital Preparedness Planning grant. Ms. Jenkins has over twenty-seven years of progressively responsible budgeting, planning and policy analysis experience in Missouri state government (see attached curriculum vitae).

The responsibilities of the executive director will include the following:
- Ensure coordination and collaboration in bioterrorism and emergency response planning;
- Manage staff and activities of the CDC and HRSA grants to ensure that Missouri is fulfilling the requirements of the CDC and HRSA grants;
- Evaluate Missouri's bioterrorism preparedness and response capabilities and capacity to determine areas needing further improvement; and
- Communicate with policy makers the status of Missouri's bioterrorism preparedness and response ability with recommendations for future action.

To ensure coordination and collaboration between the CDC and HRSA grants for bioterrorism preparedness and response planning, the executive director will have responsibility over both grants and management responsibilities for the staff coordinating the two grants. The position will also have responsibility to ensure that coordination and collaboration exists with other emergency planning occurring in Missouri, including serving on advisory committees of other planning efforts as well as on the Missouri Bioterrorism Preparedness Committee established under Critical Benchmark #2.

The executive director will be responsible for assuring that Missouri is fulfilling the requirements of the CDC and HRSA grants and for supervising the staff implementing the grant activities. Management responsibility will include: assuring that needs assessments are performed in Missouri and that existing needs assessments are included in the gap analysis for both the CDC and HRSA grants; assuring that contracts needed to implement the bioterrorism preparedness and response activities are completed within the proposed timelines; developing monitoring systems to regularly examine contract compliance; assuring that regional and state plans are coordinated and have consistency across the state; communicating regularly with stakeholders to determine continued progress and collaboration in improving Missouri's bioterrorism preparedness and response; and ensuring that Missouri is making substantial progress in improving its bioterrorism preparedness and response capability and capacity.

The position will also have primary responsibility for evaluating actions and communicating to policy makers and stakeholders the progress Missouri is making in improving the state and local public health preparedness and response to bioterrorism and in hospital and community bioterrorism preparedness and response. Responsibilities will include quarterly reporting to the Missouri Bioterrorism Preparedness Committee as well as communications with the Governor, Office of Homeland Security and Missouri General Assembly on the status of Missouri's bioterrorism preparedness and response capacity and capability and recommendations for further improvement.

CRITICAL BENCHMARKS

2. **Establish an advisory committee to include representation from the following groups: (a) state and local health departments and governments; (b) emergency management agencies; (c) emergency medical services; (d) the Office of Rural Health; (e) law enforcement and fire departments, emergency rescue workers, and occupational health workers; (f) other healthcare providers including university, academic, medical and public health; (g) community health centers; (h) Red Cross and other voluntary organizations; and (i) the hospital community (including Veterans Affairs and military hospitals where applicable):**

Missouri has established a Bioterrorism Preparedness Committee to provide strategic leadership, direction, coordination, and assessment of activities to ensure state and local readiness, interagency collaboration and preparedness for bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies. The Committee will assure coordination between the CDC Public Health Preparedness and Response for Bioterrorism grant, the HRSA Bioterrorism Hospital Preparedness Program grant, and the emergency preparedness and response activities of the State Emergency Management Agency and others throughout the state. The Committee is key in the process for strategic leadership, direction, coordination, and assessment of activities to ensure state and local readiness, interagency collaboration, and preparedness for bioterrorism.

The current roster of the Bioterrorism Preparedness Committee is the following:

NAME	TITLE/ORGANIZATION
Susan Jenkins	Director, Center for Emergency Response/Terrorism, DHSS
Nancy Bush	Assistant Director, Center for Emergency Response/Terrorism, DHSS
Rebecca Miller	Vice President for Quality & Regulatory Advocacy, MO Hospital Association (representing all hospitals in Missouri)
Joseph Pierle	Executive Officer, Missouri Primary Care Association
Tom Mohr	Public Safety Manager, Missouri State Emergency Management Agency
Charles Jackson	Director, Department of Public Safety
William Farr	State Fire Marshal, Department of Public Safety
Mary Jo Everhart	Administrator, Platte County Health Department (Chair of Local Public Health Advisory Committee)
Gil Copley	Administrator, St. Charles County Department of Community Health & the Environment (Chair of Missouri Association of Local Public Health Agencies)
Jacquelynn Meeks	Administrator, St. Louis County Department of Health (Missouri's local public health agency with largest population)
Rex Archer	Administrator, Kansas City Health Department (representing NACCHO)
Carey Smith	Deputy Director, Division of Health Standards & Licensure, DHSS (representing State Emergency Medical Services)
Bryant McNally	Director, Center for Health Improvement, DHSS (representing Office of Rural Health)
Tricia Schlechte	Deputy Director, Health & Public Health, DHSS (representing ASTHO)
Jerry Simon	Deputy Director, Senior Services & Regulation, DHSS
Mahree Skala	Director, Center for Local Public Health Services, DHSS
Dante Gliniecki	Statewide Volunteer Coordinator, SEMA

The Bioterrorism Preparedness Committee has met throughout the process of developing the CDC and HRSA grants and provided input and guidance at the Committee level and through participation in development of the Focus level responses and plans. The Bioterrorism Preparedness Committee will meet in May/June of 2002 to examine other areas for added representation. Areas that will be considered include, but are not limited to the following: state agriculture department, mental health department and education department; public health university programs; representation of the two MMRS' in Missouri.

The Bioterrorism Preparedness Committee will meet quarterly, at a minimum, and will provide guidance on the grant activities, assure interagency collaboration and coordination, and provide an evaluation function within the bioterrorism planning and readiness assessment process by reviewing the progress of the six Focus Areas within the CDC grant and the HRSA grant.

Missouri also proposes to expand the strategic direction and coordination process by adding advisory committees to each of the six Focus Areas in the CDC grant and within the HRSA planning. These advisory committees will meet at least twice a year to provide input on the direction, resource allocation and progress of the bioterrorism preparedness and planning activities. The advisory committees will meet at least annually with the Bioterrorism Preparedness Committee to report on the results of their work and make recommendations for consideration by the Bioterrorism Preparedness Committee. The Bioterrorism Preparedness Committee will provide oversight for allocating resources and developing workplans to ensure coordination and integration with other emergency planning grants and activities based on the reports of the advisory committees.

CRITICAL BENCHMARKS

3. **Prepare a timeline for the assessment of emergency preparedness and response capabilities related to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies to aid and improve planning, coordination, and implementation.**

Timeline:

May 2002 – June 2002:	Develop DHSS Emergency Response/Terrorism Center job descriptions and positions.
May 2002 – June 2002:	Develop Regional Response Planner contracts with contract deliverables (including required outcomes for the Contracts and Planner job descriptions).
July 2002 – Aug. 2002:	Interview and complete selection of DHSS Center personnel.
July 2002 – Aug. 2002:	Contract with local public health agencies for 31 Regional Response Planners.
August 31, 2002:	Obligate all budgeted dollars for the DHSS positions.
August 31, 2002:	Obligate all budgeted dollars with local public health agencies for the 31 Regional Response Planner contracts.
Aug. 2002 – Oct. 2002:	The DHSS Emergency Response/Terrorism Center, in conjunction with other public health officials, develops an assessment process (based on National and Public Health Performance Standards).
Sept. 2002 – Oct. 2002:	LPHAs hire Regional Response Planners.
Nov. 1, 2002:	31 Planners in place statewide in the nine Missouri planning regions.
Nov. 2002 – Jan. 2003:	DHSS staff use assessment process to determine DHSS capacity/capability:
Nov. 2002 – Jan. 2003:	LPHA Regional Response Planners use assessment process to determine LPHA and regional capacity/capability.
April 2003:	Results of assessment presented to Missouri Bioterrorism Committee, and governing bodies of public health agencies with recommendations for improvement.

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CRITICAL BENCHMARKS

4. Prepare a timeline for the assessment of statutes, regulations, and ordinances within the state and local public health jurisdictions that provide for credentialing, licensure, and delegation of authority for executing emergency public health measures, as well as special provisions for the liability of healthcare personnel in coordination with adjacent states.

Timeline:

Sept. 2001:	The DHSS Office of Legal Counsel completed a review of the Missouri statutes and regulations to ensure that public health measures can be executed in the state. (See Appendix – Critical Benchmarks #4.)
Dec. 2001 – Jan. 2002:	The DHSS Office of Legal Counsel conducted a review of Missouri statutes and regulations in comparison to the proposed Model State Emergency Health Powers Act developed for the Centers for Disease Control and Prevention.
Jan. 2002 – May 2002:	DHSS staff worked with the Governor's Office and legislators in the Missouri General Assembly (chairs of Senate Public Health and Welfare Committee and Senate Aging, Families and Mental Health Committee and House Children, Families and Health Committee) to develop legislation adding a definition of bioterrorism, providing temporary licensure for medical professionals from other states to practice in Missouri during a declared disaster, and addressing several other areas in Missouri's statutes. The legislation is being considered in the current Second Regular Session of the 91st Missouri General Assembly.
April 4 and 5, 2002:	DHSS met with representatives from Missouri's eight surrounding states, the Milbank Foundation, and the Centers for Disease Control and Prevention to review the ability of states to respond and coordinate among the states during an emergency. Select legislators (chairs of public health committees), state health department directors and their general counsels along with CDC representatives examined the statutory and regulatory provisions needed to enable response across state boundaries. Based on this analysis, any further legislation will be developed to add to the current bioterrorism legislation pending before the 91st General Assembly or will be developed in the fall of 2002 for consideration during the 92nd Missouri General Assembly.

See the following in the Appendix:
Review of DHSS Statutory Authority
Review of Model Act/Missouri Statutes.

CRITICAL BENCHMARKS

5. **Prepare a timeline for the development of a <u>statewide</u> plan for responding to incidents of bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies. This should include the development of emergency mutual aid agreements and/or compacts, and provision for regular exercises that test regional response proficiency.**

Timeline:

June 2002 – July 2002: The DHSS statewide Emergency Response Plan, currently in draft and editing stage, will be evaluated.

July 2002 –Aug. 2002: Based on the evaluation, improvements to the plan will be implemented, and a State Plan developed.

July 2002 – Aug. 2002: A process for continual review, evaluation and updating of the State Plan will be developed by DHSS.

Beginning in June 2002 and at least once monthly thereafter:
DHSS division/center director management meetings will focus on the State Plan and responsibilities of the divisions/centers.

July 2002: Job descriptions within the DHSS divisions/centers will be amended to include, where appropriate, the responsibilities for emergency response and planning.

Aug. 2002 – Oct. 2002: State plan will be adapted into electronic format, with capability of staff to access through discs or web site; ability to enter job title and immediately retrieve State plan responsibilities.

Aug. 2002 – March 2003: Establish Memorandum Of Understanding (MOU) or Mutual Aid Agreements (MAA) as needed based on meetings with surrounding states, assessments, regional planning, exercise of NPS, and HRSA Hospital Bioterrorism planning.

July 2003: A tabletop exercise will be conducted using the State Plan to demonstrate proficiency in responding to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies; and an evaluation of the tabletop exercise will be conducted to improve the State Plan and proficiency in responding to bioterrorism.

Aug. 2003: A simulated exercise of the State Plan, which will include the State Emergency Management Agency and other emergency planning entities will be conducted to demonstrate proficiency and to determine additional needed improvements to the plan. Regional response will be incorporated into the simulated exercise.

CRITICAL BENCHMARKS

6. Prepare a timeline for the development of <u>regional plans</u> to respond to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.

Timeline:

May 2002 – June 2002:	Develop Medical Consultant, Regional Response Planning Manager, and CDC Terrorism Grant Coordinator job descriptions and positions.
July 2002 – Aug. 2002:	Interview and complete selection of personnel for positions; hire Medical Consultant, Regional Response Planning managers and CDC Terrorism Grant Coordinator.
May 2002 – June 2002:	Develop LPHA Regional Response Planner contracts with contract deliverables (including required outcomes for the Contracts and Regional Response Planner job descriptions).
July 2002 – Aug.2002:	Regional Response Planning managers develop assessment tool for use within the nine regions.
July 2002 – Aug. 2002:	Contract with local public health agencies for 31 Regional Response Planners.
August 31, 2002:	Obligate all budgeted dollars with local public health agencies for the 31 Regional Response Planner contracts.
Aug. 2002 – Sept. 2002:	LPHAs hire Regional Response Planners.
Oct. 2002:	31 Regional Response Planners in place statewide in the nine Missouri planning regions.
Nov. 2002 – Dec. 2002:	The DHSS Emergency Response/Terrorism Center's Regional Response Planning managers meet with LPHA Regional Response Planners to provide training, present the assessment process to be used in the regions and facilitate the regional planning process.
Monthly beginning Jan. 2003:	The DHSS Emergency Response/Terrorism Center's Regional Response Planning managers will provide monthly electronic communications to the 31 LPHA Regional Response Planners to assure coordination and collaboration among the regions.
April 2003 and July 2003:	The Regional Response Planning Committee will meet to share assessments and planning actions of the regions and develop cross-region connections for bioterrorism response and planning.
Jan. 2003 – Feb. 2003:	The LPHA Regional Response Planners use assessment tool to assess regions' capacities and to bring together region's local public health and other agencies needed to develop a regional bioterrorism planning process.

March 2003 – June 2003:   Initial regional bioterrorism plans developed in collaboration with regional Hospital bioterrorism planning.

June 2003:   Tabletop exercises conducted in each region on the initial regional plans to improve planning process and proficiency in response to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies at the regional level.

August 2003:   LPHA Regional Response Planners, in conjunction with local public health administrators, present the plans and results of the exercises to the appropriate public health governing boards.

CRITICAL BENCHMARKS

7. Develop an interim plan to receive and manage items from the National Pharmaceutical Stockpile (NPS), including mass distribution of antibiotics, vaccines, and medical materiel. Within this interim plan, identify personnel to be trained for these functions.

Plan:

The Interim plan (see Attachment on page 28) addresses how the DHSS will receive and manage items from the NPS, including:
- Procedure and criteria for requesting deployment of the NPS, standard operating procedures
- Persons authorized to accept shipments from NPS, standard operating procedures
- Standards for antibiotic treatment, standard operating procedures
- Assignment of responsibility for management of the NPS at the state and local levels, standard operating procedures (includes storage, repackaging, and distribution of materiel)
- Management of the 12-hour Push Package, standard operating procedures
- Treatment protocol for antibiotic distribution

Current NPS Training Opportunities

The Department of Health and Senior Services (DHSS) is committed to the objective of providing education and training of the NPS on a statewide basis for both state and local partners. Recognizing that having a knowledge and understanding of the scope and management of the NPS will be imperative for the public health of Missouri residents, DHSS has proactively initiated statewide orientation sessions.

Six three-hour orientation sessions have been provided to the local public health agencies (LPHAs). The sessions were held at each of the six DHSS District Health Offices located in Jefferson City, Springfield, Popular Bluff, St. Louis, Macon, and Independence. The target audience was the administrators and staff of the 115 LPHAs. The orientation was designed utilizing information from the CDC NPS Program, draft 8 of the *Planning Guide for Receiving, Organizing, Repackaging, and Distributing the CDC NPS*, and DHSS plan to manage the NPS. The objective of the presentation was to give the LPHAs needed information to facilitate a discussion with their Local Emergency Planning Committees (LEPC) of how they will plan for mass prophylaxis. The presentation covered all aspects of the NPS program with a focus on the management of the 12-Hour Push Package. The participants were also given information about the roles and responsibilities of DHSS, the State Emergency Management Agency (SEMA), CDC, and local emergency response teams.

In addition to the LPHAs, the orientation session has also been presented to DHSS staff and at two regional SEMA meetings with LEPC members. As a result of the presentation, local emergency planning partners are now discussing the effective and efficient management of a mass prophylaxis situation, as well as the physical management of the pharmaceutical stockpile.

Future Training and Planning

Although DHSS has initiated the above training sessions, additional training needs to be offered to health care and emergency response partners. DHSS proposes the following training and timeline:

1. DHSS Staff Training, Roles and Responsibilities: August 2002, train DHSS staff assigned to participate in the management of the NPS of their roles and responsibilities. (Employee classifications will be

identified and specific duties will be listed for each classification. These classifications and duties will become part of the DHSS Bioterrorism Response Plan, NPS Section.)

2. Orientation to the NPS Program, Distribution and Management: September 2002, schedule training sessions for nine statewide regions. Participants will include state and local emergency response teams, hospital personnel, health care providers, community organizations and coalitions, and other state agencies.

3. Tabletop Exercise: December 2002, the NPS Coordinator will organize a tabletop exercise in conjunction with the State Emergency Management Agency (SEMA). The objective of the exercise will be to assist with the planning of the on-site exercises for the metropolitan and rural response partners. The DHSS staff identified to have an active role in the management of the NPS will participate in this exercise.

4. Metropolitan On-site Exercise: February 2003, the NPS Coordinator will organize an exercise involving a metropolitan area of the state. The DHSS and SEMA staff, as well as representatives from the nine regions, will participate. CDC will be invited to provide technical assistance during the exercise.

5. Rural On-site Exercise: August 2003, the NPS Coordinator will organize an exercise involving a rural area of the state. The DHSS and SEMA staff, as well as representatives from the nine regions, will participate. CDC will be invited to provide technical assistance during the exercise.

6. Mass Prophylaxis Education and Information; On-going activity: The NPS Coordinator and the DHSS District Health Directors (DHDs) will provide education sessions explaining the state and local roles in the management of the NPS to LPHA governing bodies (elected boards and county commissioners), local government authorities, community coalitions and organizations, and other entities upon request. A standardized presentation will be used to assure that information is consistent. The DHDs will be provided with the presentation and trained in the delivery of the message.

Evaluation

Evaluation of NPS trainings: Each NPS training session will include evaluations of the session by participants. These evaluations will be used to guide changes in content, delivery, and logistics of the training sessions.

Exercises: The NPS plan will be tested as part of the tabletop and other exercises that test the NPS aspect of the state and regional plans. "Lessons learned" from the exercises will be used to evaluate the need for the development of additional training, or revisions of existing training.

Additional training sessions may be developed based on the evaluation of the on-site exercises, response from the orientation and educational sessions, and changes identified by CDC related to the management of the NPS.

See attachment immediately following:
Interim Plan for Management of the National Pharmaceutical Stockpile

Attachment: Critical Benchmark #7

Interim Plan for Management of the National Pharmaceutical Stockpile

Goal:
To provide life-saving pharmaceuticals and medical supplies in the event of a biological, chemical or nuclear event to reduce morbidity and mortality with or without the activation of the National Pharmaceutical Stockpile (NPS).

Strategies:
- The Director of the Department of Health and Senior Services, in consultation with the State Emergency Management Agency (SEMA) and the local jurisdiction, shall determine whether the Governor should be advised to request activation of the National Pharmaceutical Stockpile by the Centers for Disease Control and Prevention.
- When the Department determines that the deployment of the 12-hour push package from the National Pharmaceutical Stockpile is not required, it may request that the Centers for Disease Control and Prevention assist with the provision of medical supplies sufficient to meet the need. The supplies will be delivered to the same airports that would receive the National Pharmaceutical Stockpile, or at an address determined by the Department or the Local Emergency Operations Center (LEOC). The LEOC will accept delivery, will be responsible for transportation, and will determine who will administer any drugs or other medical services to the affected population.
- When required, the National Pharmaceutical Stockpile shall be delivered to an airfield in Kansas City, St. Louis, Popular Bluff, Springfield, or Columbia as designated by the Director of the State Emergency Management Agency. The Director of the State Emergency Management Agency shall secure the NPS, shall transport the NPS from the airport when required, and shall coordinate the delivery of medical supplies, services and pharmaceuticals pursuant to a memorandum of understanding with the DHSS.
- The Metropolitan Medical Response System (MMRS) in Kansas City and St. Louis and the Local Emergency Planning Commission in other jurisdictions will identify sites that contain at least 5,000 square feet of climate-controlled storage space for temporary storage and repackaging of NPS drugs and supplies should such use become necessary. The MMRS or Local Emergency Planning Commission shall obtain warehouse space immediately upon activation of the NPS 12-hour push package and shall ensure that space is available within twelve hours of activation of the NPS 12-hour push package.
- The Vendor Managed Inventory (VMI) may be activated at the request of the Governor in the same manner that the National Pharmaceutical Stockpile is activated when the NPS 12-hour push package is inadequate to meet a biological, chemical or nuclear event.
- The LEOC/MMRS will monitor and maintain environmental conditions at the distribution site(s).
- The DHSS shall ensure that its employees receive proper prophylaxis before requiring them to respond to a biological, chemical or nuclear event.

Attachment: Critical Benchmark #7

Assignment of Responsibilities for Management
Of the National Pharmaceutical Stockpile
Standard Operating Procedures

1. **Department of Health and Senior Services (DHSS) shall:**
    a) Recommend request of NPS
    b) Sign for NPS upon arrival at airfield
    c) Set standards
    d) Establish forms to be used throughout event
    e) Establish that there is sufficient legal authority to repackage and dispense drugs
    f) Assist with training of volunteers prior to the event
    h) Verify recovery and packaging of unused NPS medication and supplies
    i) Dispatch personnel to SEOC during an event
    j) Assist local teams who do not have the infrastructure to adequately respond

2. **State Emergency Management Agency (SEMA) shall:**
    a) Determine appropriate airfield to receive NPS
    b) Coordinate plan with CDC to unload and transport NPS to storage site
    c) Coordinate plan to transport NPS to dispensing sites
    d) Coordinate security at storage site and crowd control
    e) Coordinate appropriate storage of NPS medication and supplies
    f) Assist with training of volunteers prior to the event
    g) Coordinate transportation of unused NPS to pick-up site

3. **Local Emergency Response Teams (MMRS or LEOC)**
    a) Cooperate with the local public health agency to enhance surveillance
    b) Establish plan with treatment centers to create a network of persons who, in a deployment, can report on the number of symptomatic casualties diagnosed or being evaluated, and current inventories of drugs and supplies to treat them. (This is needed to fairly apportion NPS drugs, supplies, and equipment for clinically ill patients.)
    c) Establish plan to reach high-risk populations
    d) Recruit volunteers for repackaging and distribution of NPS
    e) Train volunteers prior to event
    g) Determine repackaging site(s) and process
    h) Determine dispensing site(s) and process
    i) Dispensing medication
    j) Track individuals receiving treatment
    i) Recovery and packaging of unused NPS medication and supplies
    k) In conjunction with state and federal agencies, determine when prophylaxis is no longer needed
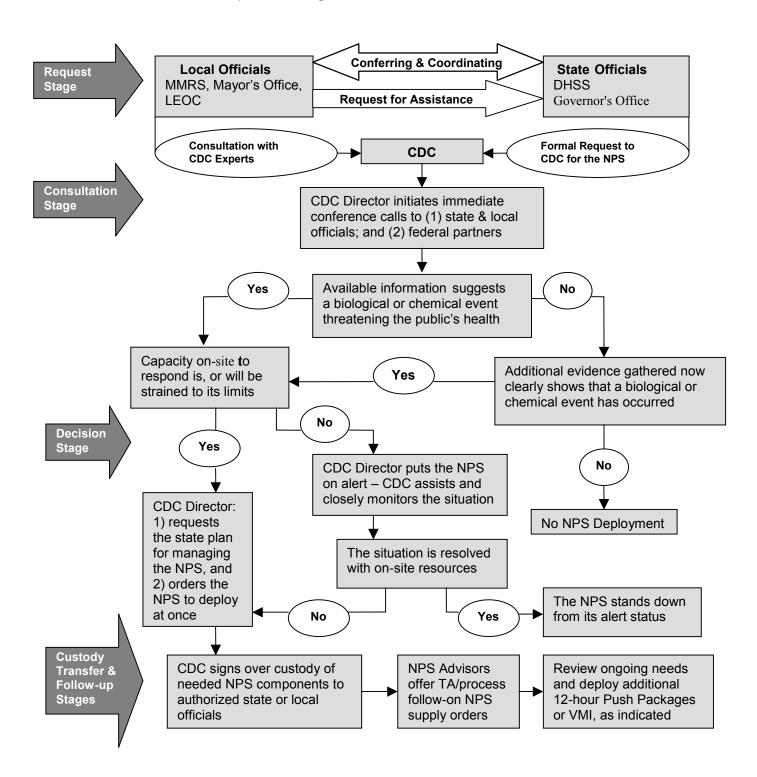   l) Respond to local media.

Attachment: Critical Benchmark #7

Persons Authorized to Accept Shipments
From the National Pharmaceutical Stockpile
Standard Operating Procedures

The Director of the Department of Health and Senior Services or designee and the Department's Medical Consultant may accept NPS materiel at any location in Missouri.

The Center for Emergency/Terrorism Response will maintain the designee list, update changes and update this plan. Updates will be provided to the Centers for Disease Control and Prevention at:

NPS Program/NCEH/EEHS/CDC
1600 Clifton Road, NE
MS D-08
Atlanta, GA 30333
(404) 639-0459

Attachment: Critical Benchmark #7

**Algorithm
for Requesting, Deploying, and Receiving
The National Pharmaceutical Stockpile
In a Suspected Biological or Chemical Terrorism Event**

Request Stage

Local Officials
MMRS, Mayor's Office, LEOC

Conferring & Coordinating

Request for Assistance

State Officials
DHSS
Governor's Office

Consultation with CDC Experts → **CDC** ← Formal Request to CDC for the NPS

Consultation Stage

CDC Director initiates immediate conference calls to (1) state & local officials; and (2) federal partners

Yes ← Available information suggests a biological or chemical event threatening the public's health → No

Capacity on-site to respond is, or will be strained to its limits ← Yes ← Additional evidence gathered now clearly shows that a biological or chemical event has occurred

Decision Stage

No

Yes

No → CDC Director puts the NPS on alert – CDC assists and closely monitors the situation

No → No NPS Deployment

CDC Director: 1) requests the state plan for managing the NPS, and 2) orders the NPS to deploy at once

The situation is resolved with on-site resources

No ← → Yes → The NPS stands down from its alert status

Custody Transfer & Follow-up Stages

CDC signs over custody of needed NPS components to authorized state or local officials → NPS Advisors offer TA/process follow-on NPS supply orders → Review ongoing needs and deploy additional 12-hour Push Packages or VMI, as indicated

CRITICAL BENCHMARKS

8. Prepare a timeline for developing a system to receive and evaluate urgent disease reports from all parts of the state and local public health jurisdictions on a 24 hour per day, 7 day per week basis.

The Department of Health and Senior Services has an after-hours answering service in place for telephone notification of urgent disease reports, or any other urgent public health matter, on a 24-hour-per-day, 7-days-per-week basis. Incoming calls are relayed to a member of DHSS senior management, designated as Duty Officer and available via pager and cell phone. This responsibility rotates weekly. The Division of Environmental Health and Communicable Disease Prevention also maintains a duty officer system 24/7, so the DHSS Duty Officer can always reach key staff members to evaluate and respond to disease reports, environmental emergencies, or potential bioterrorist incidents. Call-down lists of personnel responsible for these services and mechanisms for contacting the local public health agencies are provided to the Duty Officer. Key DHSS staff, including district field staff, also have pagers and cell phones.

The local public health agencies (LPHAs) in the three major metropolitan areas (St. Louis, Kansas City, and Springfield) are all available 24/7 for emergency response and after-hours disease case notification, through paging services and duty officer systems. Most other LPHAs serving populations over 65,000 also have systems in place 24/7 for disease reporting and emergency response. Some receive calls via their local joint communications/emergency response systems (i.e., the 911 system) and others publicize a dedicated phone number for the LPHA after-hours answering service.

The largest gaps in around-the-clock LPHA availability exist in the rural areas of the state. Capacities vary widely, and many do not have mechanisms established for staff coverage, or up-to-date communications technology such as pagers or cell phones.

Improvement Plan:

Objective 1: To improve the existing public health communication system and assure that a system is in place to receive and evaluate urgent disease reports, 24 hours per day, 7 days per week, throughout the state. The following activities will be carried out:
- Designate and publicize a toll-free hotline number for after-hours reporting of urgent disease cases and potential bioterrorist incidents, linked to the DHSS answering service and Duty Officer system.
- Conduct an assessment to determine existing capacity of all 114 LPHAs for 24/7 receipt of and response to disease reports.
- Using the results of the assessment and based on need, provide funding to LPHAs to acquire necessary communications equipment, including pagers, cell phones, and satellite phones, and assure that each LPHA has a duty officer on call 24/7 to receive urgent reports locally.
- Develop bioterrorism detection and response plans for each region, integrated with the overall regional plans (see Focus Area A), that include activation of LPHA personnel to respond to emergencies, including urgent disease reports and potential bioterrorist incidents.

DHSS will also develop the technological capacity to receive and analyze electronic databases from laboratories and hospitals for morbidity reporting and active syndromic surveillance purposes (see Focus Area B, Critical Capacity I.A., Objective 8). In future years, when these systems are in place, algorithms will be applied on an ongoing basis to detect aberrations and computer programs will be developed to automatically notify key state and local staff if established thresholds are exceeded, using the communications technology described above.

Timeline:

May 2002 – Aug. 2002	Establish and publicize a toll-free hotline number for after-hours reporting of urgent disease cases and potential bioterrorist incidents to DHSS.
May 2002 – Aug. 2002	Conduct an assessment to determine existing capacity of all 114 LPHAs for 24/7 receipt of and response to disease reports.
Sept. 2002	Provide funding to LPHAs to acquire necessary communications equipment, including pagers, cell phones, and satellite phones, and assure that each LPHA has a duty officer on call 24/7.
Jan. – July 2003	Develop regional plans, including epidemiologic response plans, that include procedures for activating LPHA personnel to respond to emergencies.

CRITICAL BENCHMARKS

9. **Assess current epidemiologic capacity and prepare a timeline for achieving the goal of providing at least one epidemiologist for each Metropolitan Statistical Area (MSA) with a population greater than 500,000.**

There are two MSAs in Missouri with populations greater than 500,000: Kansas City (1,582,874) and St. Louis (2,569,029). The third largest MSA, Springfield, has a population of 308,332. Several staff with epidemiology training are employed by LPHAs in these areas (see table below). Only those with responsibilities related to infectious diseases are shown, although there are additional, experienced infectious disease epidemiologists who have moved into other programs or administrative positions within these LPHAs.

MSA	Ph.D. Level	Master's Level	Other Epi. Specialist	Communicable Disease Investigators
Kansas City (and MO suburbs)	1	6	1	10 ½
St. Louis (and MO suburbs)	1	1	4	20
Springfield	0	2	2	0

In addition to these LPHA employees, DHSS employs Epidemiology Specialists (two each in the Kansas City and St. Louis MSAs) in the Section of Communicable Disease Control/Veterinary Public Health. They provide technical assistance to the LPHAs regarding disease surveillance and response.

Improvement Plan with Timelines:

Objective 1: To enhance epidemiologic capacity in the two major MSAs through the following actions:

1. Hire three doctoral-level Consultant Epidemiologists, to be stationed in the district offices in St. Louis, Independence (KC MSA), and Springfield. Their duties will include but not be restricted to:
  • Serving as the Regional Surveillance and Epidemiology Coordinators for these metropolitan areas and for the surrounding planning regions.
  • Establishing and coordinating a Regional Rapid Detection and Response Team (RRDRT) in each planning region (see Focus Area B, Critical Capacity II.A.6).
  • Serving on the Statewide Bioterrorism Preparedness Sub-committees (see Focus Area A).
  • Serving on the regional planning committees (see Focus Area A).
  • Coordinating the development and exercise of the epidemiologic investigation and response portions of the regional and statewide plans (see Focus Area A).
  • Coordinating surveillance evaluation activities as described in Focus Area B, Critical Capacity I.A.3.

2. Hire six Epidemiology Specialists (Masters level or equivalent experience), to be stationed in the district offices in St. Louis, Independence (KC MSA), Springfield, Poplar Bluff, Macon and Jefferson City to assist and serve as back-up to the Consultant Epidemiologists. Their duties will include but not be restricted to:
  • Developing, exercising and maintaining proficiency of the RRDRTs.
  • Assuring that response occurs within defined timeframes and consistent with regional plans.
  • Coordinating among RRDRTs serving contiguous areas.
  • Providing technical assistance and consultation to LPHA staff in the regions, and monitoring the surveillance/epidemiology contracts with LPHAs (see below).

3. Establish contracts with LPHAs in each of the four largest metropolitan areas to provide epidemiology specialists (Masters level or equivalent experience) at a ratio of at least one per 350,000 population. Their duties will include but not be restricted to:

- Serving on the Regional Rapid Detection and Response Team.
- Participating in regional bioterrorism planning, training, and exercises.
- Providing information/technical assistance to mandated disease reporters in their assigned areas.
- Participating in case and outbreak investigation and response activities in their assigned areas.
- Carrying out activities designed by the Advisory Committee on Surveillance and Epidemiology to evaluate the passive and active surveillance systems.

Timeline:

May – June 2002	Develop job descriptions and establish new DHSS positions
	Develop contracts with LPHAs, specifying deliverables and funding levels
July – Aug. 2002	Interview and complete selection of personnel for positions
	Contract with LPHAs for 24 epidemiology specialist positions
August 31, 2002	Obligate all budgeted funds
Sept. – Oct. 2002	LPHAs hire epidemiology specialists
Sept. – Nov. 2002	Provide orientation and training for new DHSS and LPHA staff
Nov. 2002 – Jan. 2003	Establish and convene Regional Rapid Detection and Response Teams

CRITICAL BENCHMARK

10. Prepare a time line for ensuring effective working relationships and communication between Level A (clinical) laboratories and higher level laboratories (i.e., Level B and C laboratories).

This past year the Missouri State Public Health Laboratory (SPHL), utilizing funding from CDC to implement the Laboratory Response Network (LRN), hired a ½ time Project Specialist to identify Level A laboratories; enhance communication with clinical laboratories and pilot training sessions utilizing video conferencing equipment purchased through the HAN grant. A master contact list of all Level A laboratories has been prepared which includes the laboratory name, address, contact person, telephone number, fax number, e-mail address (if applicable) and a self-evaluation of capacity to perform rule-out testing for anthrax. Two e-mail groups were established and validated for those laboratories with e-mail capability, one composed of those with the capacity to perform rule-out anthrax testing and one without that testing capacity.

The SPHL has placed information on the DHSS web site dealing with Category A bioterrorism threat agents in both Word and pdf format. This information includes specimen collection and transport, test procedures performed by the SPHL, reference culture submission, environmental testing (if applicable), turn around time for laboratory results and contact names and telephone numbers. The web site also provides a generic e-mail service, which is checked daily, for questions of a less urgent nature and links to other useful sites such as the Department of Health and Senior Services (DHSS) homepage, CDC, USAMRID, etc. The web address has been provided to all laboratories on the master list by e-mail or letter mail.

The first pilot training session utilizing video conferencing technology has been provided to laboratorians with 34 attendees representing 18 facilities. It was presented in collaboration with St. Louis City and St. Louis County Health Departments. The SPHL staff provided information about the LRN, the specimen submission process and technical information for Category A agents. The local public health agencies provided local public health response information and information from emergency management and the FBI. Two additional training sessions are planned for presentation in other areas of the state by the end of June.

The SPHL proposes to hire a Laboratory Program Advisor and State Laboratory Training Coordinator whose responsibilities will include completion and maintenance of the LRN.

Objective 1: To establish and maintain the Laboratory Response Network throughout the state of Missouri to ensure readiness, collaboration and preparation for bioterrorism, other outbreaks of infectious diseases and other public health threats and emergencies.

SPHL will hire a Laboratory Program Advisor (LPA) who will provide support to the SPHL Director to ensure the organization, management and accomplishment of program objectives. The duties will include but are not restricted to:
- Communication and coordination among the SPHL, Level A clinical laboratories and environmental laboratories within the state.
- Oversight and coordination for all of the objectives listed under Capacity A and many in Capacity B, including planning, assessment, evaluation, communication and coordination functions.
- Serve as lead in developing the SPHL bioterrorism/emergency response procedures within the DHSS emergency response plan.
- Serve as the SPHL contact with the DHSS Center for Emergency Response/Terrorism.

- Serve as the SPHL representative on emergency response planning committees at the local, state and national level.
- Attend national meetings/trainings on emergency response.
- Serve on the Statewide Bioterrorism Committee's sub-committees as needed.

Objective 2: To provide training and education to laboratory and medical personnel and other identified partners such as local health, law enforcement, HazMat and first responder personnel to ensure readiness and preparation for bioterrorism, other outbreaks of infectious diseases and other public health threats and emergencies.

The SPHL will hire a Laboratory Training Coordinator, under the direct supervision of the LPA, and whose responsibilities will include, but are not limited to:
- Maintain the contact list for Level A laboratories.
- Conduct need/testing capacity assessments of Level A clinical and environmental laboratories.
- Working with the Laboratory Information Technologist (See Capacity B, Obj.7), conduct an assessment of the information technology capabilities of the Level A laboratories.
- Conduct training needs assessments within the SPHL system.
- Maintain the bioterrorism information on the SPHL web page through the Office of Public Information.
- Identify possible training partners such as universities, health systems, local public health agencies, etc.
- Design and present training courses for laboratory personnel, emergency response personnel, local public health personnel, etc.
- Coordinate training activities with the National Laboratory Training Network.

Timeline:

May 2002 – June 2002:	Develop job descriptions and establish positions.
	Obligate dollars for new positions.
July 2002 – Aug. 2002:	Interview and complete selection of personnel for positions.
	Establish SPHL Sub-Committee as described in Focus Area A.
Sept. 2002 – Oct. 2002:	Provide orientation and training for new personnel.
Nov. 2002 – Jan. 2003:	Complete identification of Level A laboratories.
	Identify Environmental Laboratories.
	Verify communication channels with Level A clinical laboratories and environmental laboratories.
	Design a testing capacity/training needs assessment for Level A clinical and environmental laboratories.
	Design an assessment of information technology capabilities for Level A clinical laboratories and environmental laboratories.
	Design training for level A laboratories on specimen collection and specimen transport for chemical response.
Jan. 2003:	Update SPHL Sub-Committee on progress toward completing objectives of Bioterrorism plan.
Feb. 2003-April 2003:	Conduct assessments of Level A laboratories for testing capacity/training needs and information technology capacity, evaluate results and prioritize needs.
	Meet with proposed Regional Response Planners, local public health agencies and emergency responders to assess training needs and develop a training plan.

Meet with Federal and State emergency responders to determine training needs and develop a training plan.

Export information on specimen collection and transport for chemical testing to Level A laboratories and local responders.

May 2003 – Aug. 2003:   Meet with Regional Response Planners and local public health agencies to evaluate their local laboratory testing capacity results verses identified laboratory needs for response, identify gaps and develop correction plans.

Submit SPHL response plan, gap analysis and correction plans to the SPHL Advisory Committee.

Begin developing training sessions for Level A laboratories, based on prioritized needs assessments and training plans.

CRITICAL BENCHMARKS

11. Prepare a timeline for a plan that ensures that 90 percent of the population is covered by the Health Alert Network.

Population covered by Health Alert Network: The Missouri Department of Health and Senior Services (DHSS) has met Critical Benchmark #11. Currently, the Health Alert Network (HAN) covers all but two local public health agencies or 97 percent of Missouri's population. During 2002 DHSS will strongly encourage the remaining two agencies to participate in the HAN.

The DHSS has connected over 2,000 PCs in the DHSS central office and remote sites throughout the state via high-speed leased lines to create a seamless department-wide network. The network uses Compaq Proliant servers with Novell Netware and WindowsNT, IBM RS6000 servers and an IBM SP frame using AIX to support the network. Client workstations, primarily IBM and Compaq PCs, connect to the network servers using 100 megabit Ethernet lines. Standardized network software includes GroupWise, Microsoft Word, Excel, Access, Microsoft Project and PowerPoint. The RS6000 and SP servers are used for statistical analysis, Internet/Intranet web servers, firewalls, the MOHSAIC database, and the data warehouse. The SP frame has a capacity of eight nodes that can run as serial or parallel processing nodes.

All of the 114 Local Public Health Agencies (LPHAs) are connected to DHSS through high-speed lines. The DHSS WAN uses Proteon and IBM routers, Racal CSU/DSU's, and Bay network hubs to connect external sites. DHSS has multiple T1 backbone lines to the St. Louis, Kansas City and Springfield metropolitan areas. The rural sites are connected to the backbones via Frame Relay lines varying in speeds from 56KB to 384KB. Some remote sites access the network through dialup lines to Bay Networks Remote Access Server modem pools that are connected to Compaq Proliant servers running Citrix MetaFrame software with Radius authentication. The WAN also links most of the federally qualified health centers and a number of Missouri's rural health clinics to DHSS and other participants. At present the network is not available during routinely scheduled backup and network maintenance procedures.

Over the past two years DHSS has been building a technology infrastructure to improve the state's ability to respond to a bioterrorism attack. During this time DHSS has increased its bandwidth and secured communications between DHSS and the LPHAs. Services that have been added to DHSS and the county and city health departments to respond to a bioterrorism attack or other health emergency included: secure e-mail between county and major city health offices and DHSS, video conferencing between DHSS and the three Metropolitan Statistical Areas (MSAs), automated fax capabilities for the counties and major cities and Web-based video training. Two way video communications are via TCP/IP using the DHSS WAN.

The State's public health e-mail is done over these private lines and does not interface with the public Internet e-mail, making it secure. All but two LPHAs are using secure e-mail capability. LPHAs access the World Wide Web via the existing DHSS network infrastructure. The State of Missouri has a high-speed, continuous link to the Internet that serves all state agencies that is secured by firewall and network segmentation. The LPHAs use their existing dedicated lines for direct Internet access 24 hours a day, 7 days a week.

Timeline:

     May 2002 - June 2002: Contact two LPHAs not currently connected to HAN.
    June 2002 - Sept. 2002: Resolve any networking issues and connect 100 % of LPHAs to HAN.
Aug. 31, 2002 – Aug. 30, 2003: Sustain existing HAN capacity.

CRITICAL BENCHMARKS

12. Prepare a timeline for development of a communications system that provides for a 24/7 flow of critical health information among hospital emergency departments, state and local health officials, and law enforcement officials.

Missouri has been successful in communicating using the existing capacity of Missouri's HAN, but this capacity does not adequately meet the need for 24/7 communications. DHSS already has a 24/7 duty officer system with after-hours answering service, access to key surveillance and disease control staff via pagers and cell phones, and established policies and procedures for responding to after-hours reports. Many of the LPHAs have implemented similar procedures for notification of public health issues in their jurisdictions. Communication of alerts and other critical information is completed via a variety of means. At present the 24/7 duty officer system and the HAN capacity have not been fully integrated. The HAN currently requires the receiver of the information be physically present at the place where a FAX is received or at their computer at work to access e-mail. Often this is during routine work hours only and does not provide 24/7 out-of-the-office notification that a communication has been received.

Missouri proposes to integrate the HAN system with the current 24/7 duty officer system. The duty officer system will be interfaced using the department's 800 number to receive notifications from all levels. Once received, the duty officer will use the HAN system as a tool to rapidly receive and disperse communications among public health partners at the local, regional, state and federal levels, assign and track follow-up activities and receive electronic reports of diseases from health care providers and laboratories. This interface will include the ability to rapidly notify appropriate levels of staff and support the activation of the Departmental Situation Room (DSR). When the Director of DHSS activates the DSR, high-level representatives of the appropriate DHSS program areas (surveillance, epidemiology, local agency coordination, public information, information technology, etc.) gather in a single room to coordinate all DHSS responses to the emergency.

DHSS will acquire the technical staff and software needed for continuous 24/7 electronic communications and network support. The HAN supports e-mail and continuous Internet access through the DHSS office for almost all of the local public health agencies. Placing technical staff at DHSS will provide needed support to make the HAN available at the local and regional levels. Acquisition of sufficient staff and software will provide 24/7 system support capacity to respond to communication or network issues at the local, regional and state levels.

DHSS will enhance the current web site. A portion of this web site will be developed in collaboration with Focus Areas F & G to support risk communication and health information dissemination and provide professional information such as the most recent alerts, protocols for screening and treatment related to diseases or conditions of interest to public health. A third portion of the web site will be secured. This area will be used to post restricted information that can only be accessed by authorized users. The standards identified in Appendix 6, IT Functions # 8 and 9 will be complied with.

Timeline:

May 2002 – July 2002	Integrate Duty Officer procedures with HAN procedures.
May 2002 – Sept 2002	Acquire OIS and contract staff for 24/7 coverage and enhancement plan.
May 2002 – Sept 2002	Develop enhanced plan for electronic 24/7 communications including implementation of ENS software.
May 2002 – Oct 2002	Acquire and install Web server, create secure access.

Sept 2002:   Present 24/7 plan to the State Bioterrorism Preparedness & Response Program Advisory Committee for acceptance.

Sept 2002 – Dec 2002:   Acquire and install needed technology.

Oct 2002 – Dec 2002:   Create public health personnel directory template.

Nov 2002 – Jan 2003:   Train staff responsible for creating and maintaining directories.

Dec 2002 – June 2003:   Complete implementation at the state, regional and local levels.

May 2003:   Initiate testing of the system to determine communications flow.

July 2003 – Aug 2003:   Exercise communications systems as part of Regional and Statewide simulation exercises – correct deficiencies.

Aug. 2003   Initiate ongoing assessment and address weaknesses/gaps in communication flow.

CRITICAL BENCHMARKS

13. Develop an interim plan for risk communication and information dissemination to educate the public regarding exposure risks and effective public response.

Interim Risk Communication Plan

Missouri Department of Health and Senior Services

Purpose:

    The Department of Health and Senior Services (DHSS) public information staff will coordinate and deliver risk communication and public health information support during a bioterrorism event. These support operations will be accomplished in close coordination with the State Emergency Management Agency's (SEMA) public information officer and/or other lead public information officers in accordance with state and federal emergency plans, as well as with appropriate local public health agencies.

Overall objectives:
- To gain public confidence by providing information that is accurate, timely and pertinent.
- To prevent public panic.
- To direct public action.
- To meet the needs of the news media.
- To coordinate with other agencies involved in responding and providing information to the public.

Organization:
1.   Primary Public Information Responsibility
   - The chief of the Office of Public Information (OPI) is the lead person who will make staffing decisions (including shifts and locations) and will direct how public information resources will be utilized. If that person is not available, the next person(s) in succession will be responsible for these decisions.
   - The list indicating the order of succession for public information staff during a disaster is included in the appendices to the DHSS Emergency/Terrorism Response Plan. (attached)

2.   Public Information Staffing
   - A list of all DHSS staff (including district staff) who will serve as bioterrorism spokespersons will be available from the chief of the Office of Public Information. This staffing list will be reviewed annually and will indicate if the individual has had disaster/emergency training. (attached)
   - The Office of Public Information will request annually a list of spokespeople from each local public health agency.

3.   Staff Assignments
   - The lead DHSS public information officer (PIO) may deploy members of the public information staff to the DHSS Disaster Situation Room, the State Emergency Operations Center, the bioterrorism event site and/or the region to obtain, evaluate and coordinate available data and information at these locations. The need for clerical support will be evaluated and assignments made accordingly.
   - The DHSS lead public information officer will offer support to affected local public health departments. If possible, the state will provide a PIO to be on-site at the local agency.

- The lead PIO will designate the DHSS spokesperson for SEMA's Joint Operations Center, as well as any other JOC as may be established during emergency response operations.
- The lead PIO and/or the public information designee will participate in all briefings and daily staff updates.

Bioterrorism Event Responsibilities:

The lead DHSS public information officer, in coordination with other state and federal officials, will:

1. Use the media, outreach and other communication systems to provide risk communication and to inform and instruct individuals, families, businesses and industries about health and medical factors involved in the emergency.

   - Fact sheets, which can be used in preparing news releases, will be included as appendices to the DHSS emergency/terrorism response plan. They will be organized by type of disaster.
   - The Office of Public Information will oversee and coordinate with appropriate programs to staff the 24-hour hotline.
   - The lead PIO will ensure that the department uses its web site to provide important health and safety information for targeted groups. Groups will include the general public, health care providers, first responders, etc. Information posted to the site will include news releases, fact sheets and other pertinent health information.
   - The lead PIO will coordinate with local public health agencies, other state and federal agencies and cities/states across state lines to ensure that consistent messages are being delivered.

2. Ensure the accuracy, timeliness and appropriateness of all health and medical public information before its release to the media.

   - No DHSS District, Division, Center or Unit will independently release bioterrorism-related information (news releases, fact sheets, etc.) without approval of the Director of DHSS, his/her designee, or the DHSS public information officer-in-charge.

3. Respond to and record media requests for health or medical information.

4. Determine whether to schedule media briefings or news conferences. If warranted, arrange for daily or twice-daily media briefings.

5. Update DHSS staff and local public health agencies with messages released to the media.

6. Update the director or his/her designee daily on public information/risk communication activities.

Recommendations:

- Provide emergency response/bioterrorism media training and risk communication training for staff given public information responsibility in Jefferson City and district offices
- Provide emergency response/bioterrorism media training and risk communication training for staff in local public health agencies
- Develop hotline procedures (lead agency, training, staffing, mechanics)
- Coordinate with the Center for Health Information Management and Evaluation to develop targeted web site information

- Address language needs statewide and in every county

STANDARD OPERATING PROCEDURES:
1. Active Duty Roster List
    a. The chief of the Office of Public Information is the lead person who will make staffing decisions (including shifts and locations) and will direct how public information resources will be utilized. If that person is not available, the next person(s) in succession will be responsible for these decisions.
    b. Staff will be assigned to 12-hour shifts (3 days in succession) and situated in the DHSS disaster situation room (DSR), SEMA's Joint Operations Center and possibly on-site.
    c. The most current call-down list of public information staff and support staff will be provided in the "go-kits." It is expected that each location may need a Public Information Team (which would include a decision-maker, trained public information staff person and support staff). The lists will be updated every 3 months, or as needed, by the chief of the Office of Public Information.
    d. If communication is disrupted, individuals on the call-down list need to check in to the DSR within 8 hours of event to check schedule. The primary public information teams should report to the DSR immediately in the event of an emergency.

2. Public Information "Go-kits"
    "Go-kits" will be prepared for three locations in Jefferson City (OPI chief's office, 912 Wildwood; DSR, 912 Wildwood; and SEMA's joint operations center) and each district office.

    Each of the kits will include:
    a. Emergency Response Plan and Standard Operating Procedures
    b. Media Inquiry Form
    c. PI Activity Folder, including two file folders: Pending, Completed
    d. Call-down list for PI team members
    e. Template for program staff/OPI staff to use in drafting news releases
    f. Procedures for locating/using laptop computer that has been designated for Public Information emergency use. The laptop will have the current version of Microsoft Word and Microsoft Access.
    g. Procedures for sending news releases
    h. Media List
        - Hard copy of all media (sorted by county) and Access data base on diskette
        - Major media list (including name, phone, fax, e-mail and street address)
    i. News Release Status Form (to be attached to each news release)
    j. News Conference/Briefing Form
    k. Fact Sheets (on anthrax, tularemia, etc.) and Other Emergency Information (in folder)
    l. Directory of Services
    m. Paper, pens and other office supplies
    n. Laptop computer
    o. Portable printer

3. Public Information Distribution (news releases, public health statements, fact sheets)
    a. PI staff on duty will draft news releases from information provided by program staff. A template for drafting news releases will be provided in the "go kits."
    b. Approval for all outgoing public information must be obtained from the DHSS director, his/her designee, or the DHSS Public Information Officer-in-Charge.
    c. The public information officer-in-charge will determine the distribution procedures that best fits the situation:
        - Distribution to major media (List will be provided in the "go kits.")

- Distribution to regional media (The data base can be used to select and sort regional media.)
- Distribution to all media (A hard copy and electronic file of the media list and instructions for sending releases by e-mail and broadcast fax will be provided.)

    d. The completed news releases will be posted on the DHSS web site, with the assistance of the OIS staff in the DSR.

4. Logging Calls
   a. All media calls will be logged using OPI's media inquiry form.
   b. Forms of completed media inquiries will be kept in folders by date/time received.
   c. Forms for the media inquiries that need follow-up will be kept in a pending folder.

5. PI Activities Status
   a. All news releases (completed/sent, pending) will be kept in the PI Activity Folder (in the Completed or Pending folder). Each news release will have a form attached indicating status and/or distribution.
   b. A report from each news conference indicating information such as date held, speakers, attendees, questions and answers, talking points, handouts, etc. will be kept in the PI Activity Folder. Forms to record information will be provided in "go kits."
   c. News conferences/briefings held on-site of event will be reported to the DSR.

6. Media List
   a. A hard copy and the electronic Microsoft Access file (on diskette) of the media list will be kept in each PI "go kit." The database lists the media by county and includes phone numbers, fax numbers, e-mail addresses (if provided by the media) and street addresses.
   b. The media database is updated on an ongoing basis. An updated list/disk will be sent to central office and district "go kits" every three months, or as needed.
   c. If phone lines are down, PI staff will use whatever means are available to contact media and disseminate information.
   d. A list of the major media that should be contacted during an emergency will be included in the "go kits." This list will be used when it is not feasible to send news releases/advisories to all media.

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PRE-EVENT AUDIENCES AND MESSAGES TEMPLATE
(SMALLPOX)

</div>

AUDIENCE:

    GENERAL PUBLIC

MESSAGES:

- Facts on smallpox (i.e., highly contagious, but usually only when person has severe symptoms; vaccine effective after exposure, etc.)
- There is a federal plan in place to deal with smallpox.
- The state is determining how the federal plan would work in Missouri and making adjustments if necessary.
- Smallpox is containable.
- Public health has history of addressing/containing smallpox.
- We empathize with your fear and concerns.

- Facts on vaccine (i.e., risk v. benefit, why mass immunization is not appropriate at this time, how and when vaccination would occur, etc.)
- What is quarantine, when it would be used, how it would impact individuals, what we may be asking individuals to do, which government agencies would be involved, etc.)

CHANNELS TO DELIVER MESSAGES:

- News releases
- Trained local spokespeople (for media)
- Speakers' bureaus
- Visits with editorial boards, media editors, health and science writers
- Web sites that segment audiences

AUDIENCE:

FIRST RESPONDERS (e.g., EMTs, emergency department personnel, law enforcement, 911 operators, transportation personnel, et. al.)

MESSAGES:

- The facts about smallpox (how it is transmitted, how to protect themselves from transmission, etc.)
- They have specific roles, responsibilities to carry out in a smallpox threat.
- Where they fit into federal, state and local plans.
- Information about smallpox vaccine (i.e., risks v. benefits, why CDC is not recommending routine vaccination for first responders, effectiveness of vaccine after exposure, etc.)
- Where they should take patients.

CHANNELS TO DELIVER MESSAGES:

- Trade associations.
- State agencies (e.g., Public Safety, Health and Senior Services, et. al.)
- Targeted web site.

AUDIENCE:

LOCAL GOVERNMENT OFFICIALS

MESSAGES:

- There is a federal plan. State and local officials need to review the federal plan to determine local applicability and adaptability.
- The facts about smallpox (how it is transmitted, how it is contained, etc.)
- Information about smallpox vaccine (i.e., risks v. benefits, why CDC is not recommending vaccination for first responders, effectiveness of vaccine after exposure, etc.)
- Plans for vaccination in event of an outbreak.
- Who is in charge (chain of command).
- Why quarantine is unlikely.

- When officials would consider ordering a quarantine and what would a quarantine mean to their municipality/community.

CHANNELS TO DELIVER MESSAGES:

- Trade associations
- Targeted web site

AUDIENCE:

STATE LEGISLATORS

MESSAGES:

- There is a federal plan. State is reviewing to determine applicability.
- The facts about smallpox (how it is transmitted, how it is contained, etc.)
- Information about smallpox vaccine (i.e., risks v. benefits, why CDC is not recommending routine vaccination for first responders, effectiveness of vaccine after exposure, etc.)
- Who is in charge (chain of command).
- We are providing information to local governments, first responders, etc.
- What legislative/budget needs the state has in order to be prepared.

CHANNELS TO DELIVER MESSAGES:

- Communications from the Governor, state agencies
- Share the federal, state plans

AUDIENCE:

HEALTH CARE PROVIDERS

MESSAGES:

- The facts about smallpox (how it is transmitted, how to recognize signs/symptoms, treatment protocols, etc.)
- How to report suspected cases.
- Information about smallpox vaccine (i.e., risks v. benefits, why CDC is not recommending routine vaccination for first responders, effectiveness of vaccine after exposure, etc.)
- Local plans for patient triage.

CHANNELS TO DELIVER MESSAGES
- Trade associations
- Targeted web site
- Trainings (offering CMEs)

AUDIENCE:

Media

MESSAGES:

- The facts about smallpox.
- The facts about smallpox vaccine.
- They play a crucial role in getting out accurate, timely information.
- The way they report a story can either calm the public or create unnecessary panic.
- They will be the frontline in telling the public what to do.
- They need to educate themselves now on bioterrorism agents so they can do a better reporting job in the event of a situation.

ACTION STEPS NEEDED:

- Draft fact sheets, messages, news releases and other communications, and develop method to revise as necessary.
- Identify spokespeople; develop spokesperson trainings.
- Hold practice news conferences for spokespeople.
- Identify additional state and local, internal and external groups to include in planning and preparation activities.
- Develop ways for media to participate in or witness exercises.
- Identify key media personnel to contact for outreach.
- Ensure all contact lists are up-to-date.
- Determine approval process for news releases issued during emergencies.
- Consider facility location for media during emergencies.

See the following in the Appendix:
Designated Spokespeople During a Bioterrorism Event – DHSS
Call-Down List for Public Information
Sample fact sheets

Attachment: Critical Benchmark #13

Call-Down List for Public Information
DSR Activation
Public Information Function

Primary List

Name	Office	Home	Cell	Pager
Nanci Gonder	573-751-6062	573-635-9575	573-619-2319	1461360*
Mary Kay Hager	573-751-6062	573-498-3794		800-252-7093
Jeanie Bryant	573-751-6062	573-634-7222		800-252-4251
Brian Quinn	573-751-6079	573-634-8042	573-338-1433	888-664-4923
Stephanie Gilmore	573-526-0436	573-443-4720		1461297*

For pager numbers with the *Dial 800-946-4646
  1. Voice will say: "Enter your identification (pager) number please."
  2. Dial pager code number (6 or 7 digit number)
  3. After the beep, enter numeric message of up to 12 digits.
  4. Press "#" sign and hang up.

For pager numbers without * just dial the number listed. Enter your numeric message.

Secondary List

Name	Office	Home	Cell	Pager
Mark Buxton	573-526-4998	573-761-0798		
Susan Denny	573-751-6133	660-849-2386		
Jim McDonald	573-522-2807	573-817-0015		
Bill Gordon	573-522-2845	660-826-8669		
Troy Smith	573-751-6062	573-234-1354		

Support

Name	Office	Home	Cell	Pager
Tracy Kramel	573-751-6062	573-796-3821		
Beth Thompson	573-526-7811	573-896-8244 573-295-4856 p.m and Saturday		

Attachment: Critical Benchmark #13
Designated Spokespeople During a Bioterrorism Event

Director's Office

Name	Office Phone	Home Number	Cell Phone	Pager
Ron Cates Interim Director	573-751-6001	573-896-9161	573-690-4700	*1464675
Nanci Gonder Public Information	573-751-6062	573-635-9575	573-619-2319	*1461360
Susan Jenkins Terrorism/Emergency Response	573-751-6003	573-893-7654		*1462828
Nancy Bush Terrorism/Emergency Response	573-751-6002	573-635-3949	573-619-6705	
Tricia Schlechte Health & Public Health	573-751-6459	573-635-2004	573-680-7103	*1458708
Mary Kay Hager Public Information	573-751-6062	573-498-3794		800-252-7093
Jeanie Bryant Public Information	573-751-6062	573-634-7222		800-252-4251
Dr. Eduardo Simoes Office of Epidemiology	573-751-6128	573-874-0519	573-694-8097	
Stephanie Gilmore Women's Health	573-526-0436	573-443-4720		*1461297

Division of Environmental Health and Communicable Disease Prevention

Name	Office Phone	Home Number	Cell Phone	Pager
Pam Walker Environmental Health & Comm. Dis.	573-751-6080	573-295-4827	573-690-8344	
Dr. Howard Pue Comm.Disease Control	573-751-6113	573-657-0041		888-664-5804
Harvey Marx Comm. Disease Control	573-751-6113	573-893-7213	573-680-2344	888-664-5694
Dr. Fazle Khan Office of Surveillance	573-751-9071	573-441-8448	573-680-1916	
Brian Quinn EHCDP	573-751-6079	573-634-8042	573-338-1433	888-664-4923
Susan Denny Vaccine-Prev. Disease	573-751-6133	660-849-2386		
Jim McDonald CDPHP	573-522-2807	573-817-0015		
William Gordon Cancer Control	573-522-2845	660-826-8669	660-287-1574	

District Health Directors

Name	Office Phone	Home Number	Cell Phone	Pager
Charles Williams NW District	816-350-5400	816-861-2092	816-804-6352	*403963
Jodee Fredrick NE District	660-385-3125	660-385-6758	660-651-1091	*407499
Patricia Parker Eastern District	314-877-2800	618-397-5310		800-933-3114
Angela Ford Central District	573-751-4216	573-634-2877	573-619-2704	888-215-3497
Kathryn Hadlock SW & SE District	417-895-6900	417-452-3182	417-849-0414	*1402198

For pager numbers with the *Dial 800-946-4646
1. Voice will say: "Enter your identification (pager) number please."
2. Dial pager code number (6 or 7 digit number)
3. After the beep, enter numeric message of up to 12 digits.
4. Press "#" sign and hang up. For pager numbers without * just dial the number listed. Enter your numeric message. Revised 4-9-02

CRITICAL BENCHMARKS

14. Prepare a timeline to assess training needs—with special emphasis on emergency department personnel, infectious disease specialists, public health staff, and other healthcare providers.

June 2002:	Determine what organization will be conducting the assessment. This will most likely be an academic institution.
July 2002:	Identify groups that will be assessed, i.e. family care physicians, public health professionals, emergency department professionals, infectious disease professionals, etc.
July – Aug. 2002:	Create assessments to target each group and determine how assessments will be administered, for example, paper copy, focus groups, phone interviews.
Sept. 2002:	Administer assessments.
Oct. – Nov. 2002:	Analyze data from assessments and distribute.
Nov. 2002 – Dec. 2002:	Determine contract organizations to develop training according to needs assessment. Most likely will be three to four academic institutions in state.
Jan. – March 2003:	Develop training.
Apr. – Aug. 2003:	Deliver training to various groups named above.

FOCUS AREA A: PREPAREDNESS PLANNING AND READINESS ASSESSMENT

I.   STRATEGIC DIRECTION, COORDINATION, AND ASSESSMENT

A. Critical Capacity: To establish a process for strategic leadership, direction, coordination, and assessment of activities to ensure state and local readiness, interagency collaboration, and preparedness for bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies.

Description of Existing Cap**acity:**

Bioterrorism Preparedness Committee: Missouri appointed a Bioterrorism Preparedness Committee (Critical Benchmark #2) with 17 members representing areas as required in the CDC grant application (see attachment on page 19). The committee will assure coordination among the CDC Public Health Preparedness and Response for Bioterrorism grant, the HRSA Bioterrorism Hospital Preparedness Program grant, and the emergency preparedness and response activities of the State Emergency Management Agency and others throughout the state. The committee is key in the process for strategic leadership, direction, coordination, and assessment of activities to ensure state and local readiness, interagency collaboration, and preparedness for bioterrorism.

State and Local Public Health System: Missouri's governmental public health system consists of the Missouri Department of Health and Senior Services (DHSS) and 114 local public health agencies, (LPHAs) which are locally governed. The state and local public health agencies are key in the process for conducting the bioterrorism preparedness and response planning, assessing the level of readiness, and providing direction for the bioterrorism response.

Current capacity for bioterrorism planning and assessment at the state level consists of two existing staff in the DHSS Center for Emergency Response/Terrorism (one medical epidemiologist and an emergency coordinator) and borrowed time and capacity from other staff who have existing job responsibilities other than bioterrorism planning, assessment and direction.

Current capacity for bioterrorism planning and assessment at the LPHA level varies tremendously from no to little capacity in small agencies to higher levels in agencies primarily in the greater population areas of the state. However, even in larger metropolitan areas, the LPHAs current capacity for staff with primary job responsibilities in the area of bioterrorism planning and assessment is not adequate.

Assessment of Adequacy of Current Capacity:

Bioterrorism Preparedness Committee: The current committee will meet throughout the process of developing the grant and provide input and guidance at the committee level and through participation in development of the Focus level responses and plans. However, other areas should be considered for future inclusion on the committee to ensure that interagency coordination is occurring.

State and Local Public Health System: Current capacity is not adequate at either the state or local public health level to meet the critical capacity requirements for bioterrorism preparedness planning and readiness assessment. At both the state and local levels, bioterrorism planning and assessment have occurred within existing resources and most often as an adjunct to the original responsibilities of staff. Integrated regional planning on a statewide basis has not occurred. There is no existing staffing capacity to adequately carry out this task.

Bioterrorism preparedness planning and readiness assessment to assure that Missouri has a system to respond effectively, depends on the following critical components:

- <u>Public health personnel</u> designated to direct, facilitate, coordinate and assess the planning.
- <u>Bioterrorism response plans</u> at the state, regional and local level.
- <u>Training and exercise</u> of the response plans.
- <u>Evaluation</u> of the personnel/plans following the exercises.
- <u>Refinement</u> of the response system based on the evaluations.

The DHSS needs added personnel assigned to the task of preparedness planning and readiness assessment to meet this critical capacity. The original staffing of two positions in the Center for Emergency Response/ Terrorism in DHSS does not provide sufficient public health workforce capacity needed to direct, facilitate, coordinate and assess the planning at the state, regional and local levels.

Local public health agencies need added personnel dedicated to the task of preparedness planning and readiness assessment – public health personnel who have as their whole focus the task of assuring that response plans are in place, training and exercises are conducted, that everyone knows and can execute their needed tasks, and that continual evaluation and refinement of the plans is occurring.

Proposal for Effecting Improvements with Objectives:

<u>Bioterrorism Preparedness Committee:</u> The DHSS and the Bioterrorism Preparedness Committee will meet in May/June of 2002 to examine other areas for added representation. Areas that will be considered include, but are not limited to, the following: state agriculture, mental health, and education departments; public health university programs; and representation of the two Metropolitan Medical Response System (MMRS's) in Missouri. The Committee will meet quarterly at a minimum, and will provide guidance on the grant activities, assure interagency collaboration and coordination, and provide an evaluation function within the bioterrorism planning and readiness assessment process by reviewing the progress of the six Focus Areas within the CDC grant as well as progress with the HRSA Hospital Preparedness grant.

Missouri also proposes to expand the strategic direction and coordination process by adding advisory committees to each of the six Focus Areas in the CDC grant. These advisory committees, consisting of state and local public health representatives and other programs/areas impacted by the activity, will meet at least twice a year to provide input on the direction of the Focus Area, resource allocation within the Focus Area and monitor progress of the Area. Representatives of these Focus Area advisory committees will meet at least annually with the Bioterrorism Preparedness Committee to report on the results of their work.

<u>State and Local Public Health System</u>: Missouri proposes an improvement plan that provides a statewide public health infrastructure with the capacity to fulfill this critical role of preparedness planning and readiness assessment. The plan adds public health staff at the state and local public health agency level – with shared responsibilities for regional planning and preparedness assessment.

<u>Objective 1:</u> To increase the state or local public health agency capacity to provide leadership, direction, coordination and assessment of activities to ensure readiness, interagency collaboration, and preparation for bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies:

DHSS will increase capacity through the following activities:
- DHSS has designated a senior public health official within the state to serve as executive director of the bioterrorism preparedness and response program (Critical Benchmark #1).
- DHSS will increase the department capacity by increasing the responsibilities and the staff and changing the Unit to the Center for Emergency Response/Terrorism with department-wide responsibilities for coordination of bioterrorism response and preparation. The following positions will be added: Director, Assistant Director; Medical Consultant; three Regional Response Planning

managers (located in DHSS Eastern, Northwest and Southwest District Offices, each with responsibility for three regions); a CDC Terrorism Grant Coordinator; a Hospital Bioterrorism/National Pharmaceutical Stockpile Grant Coordinator; two Health Program Representatives to assure continual coverage of the DHSS Disaster Situation Room; a Health Program Representative to coordinate training exercises and other training-related activities; an Administrative Secretary and two Clerk IVs to provide administrative support to the Center. The center will: coordinate and provide direction for bioterrorism planning and response activities throughout the department and work with other agencies in their emergency planning; assure that DHSS has a State Response Plan; provide direction/coordination for the LPHA Regional Response Planners to implement bioterrorism planning within the nine designated planning regions; ensure regional plan development that provides consistency and coordination of bioterrorism planning throughout the state and assure consistency/coordination with state and federal plans; assure that the state and regional plans are regularly exercised, evaluated and refined based on the exercises and evaluations; and provide direction/coordination of the CDC and HRSA Bioterrorism grants.

Local Public Health Agencies (LPHAs) will increase capacity to provide strategic leadership, direction, coordination and assessment through the following activities:

- Local Public Health Agencies, via Regional Response Planning contracts, will employ a total of 31 new Regional Response Planners as their component of the statewide/regional system of planning preparedness, response and assessment. The contracts are proposed based on the nine regional Missouri State Highway Patrol and the State Emergency Management Agency districts to assure coordinated statewide planning for bioterrorism at a regional level in the state (see Regional Map in Maps/Organizational Chart Section). LPHA Regional Response Planners, working with the state Regional Response Planning managers, will facilitate development of regional bioterrorism plans, assure consistency and coordination in the plans, and ensure regular exercise, evaluation and refinement of the plans based on the exercises/evaluations.

Objective 2: To improve the interagency collaboration, and preparation for bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies:

Collaboration/coordination will be increased between agencies through the following activities:

- The Bioterrorism Preparedness Committee will provide strategic leadership and guidance on the CDC and HRSA grants, as well as coordination with other emergency planning grants and with systems (hospitals, EMS, community health clinics, volunteer organizations, etc.) that are integral to bioterrorism planning, preparedness and response. Also, the Committee will provide an evaluation function to ensure that progress is being made, coordination is occurring between public health bioterrorism planning and other emergency planning activities, and that evaluation of progress is resulting in revisions to the plan/process.
- Advisory Committees will be established for each of the six Focus Areas within the CDC grant to increase interagency collaboration and cooperation.
- The regional bioterrorism plans will require interagency collaboration and preparation for bioterrorism as a condition of fulfilling the grant.

Objective 3: To ensure that high-level policy makers and elected officials at the state and local level are provided regular updates regarding preparedness activities:

Communication on bioterrorism preparedness will be assigned to the following entities:

- DHSS will be responsible for communicating regularly with the Governor's Office, Missouri's Office of Homeland Security, and the Missouri General Assembly on preparedness activities.

- LPHAs and the LPHA Regional Response Planners will be responsible for communicating regularly with their local governing boards and local elected officials.
- Missouri's Bioterrorism Preparedness Committee will provide annual reports to elected officials and the public regarding preparedness activities.

Objective 4: To ensure that there is a coordinated and integrated process for monitoring progress, allocating resources and developing workplans:

- Missouri's Bioterrorism Preparedness Committee will meet quarterly at a minimum and receive reports annually from the Focus Area advisory committees on progress as well as reports from DHSS.
- Missouri's Bioterrorism Preparedness Committee will provide oversight for allocating resources and developing workplans to ensure coordination and integration with other emergency planning grants and activities based on the reports of the Focus Area advisory committees.

Objective 5: To ensure jurisdiction-wide conferences and workshops bringing together partners and stakeholders:

- DHSS will meet with surrounding states (health directors and legislative leaders of health committees) to discuss cross-state boundaries bioterrorism preparedness and response issues.
- DHSS will sponsor a state bioterrorism conference/workshops bringing together partners and stakeholders throughout the state.
- Regional conferences/workshops will be facilitated by the Regional Response Planning mangers and LPHA Regional Response Planners to bring together partners and stakeholders at the regional levels.

Objective 6: To ensure that parts of the public health system not directly involved in bioterrorism preparedness are aware of and, when appropriate, participate in planning and implementation of cooperative agreement activities:

- DHSS will include all divisions/centers within the department in reviews of the State Plan and will include updates on the bioterrorism preparedness planning at least once a month in division/center management meetings.
- LPHAs will include bioterrorism planning updates for their management staff.
- At both the state and local level, other parts of the public health system are tasked with assisting during actual events and will be involved in exercises and operational planning for events.

Objective 7: To ensure competency of project leadership through technical, managerial, and leadership training and career development:

- Focus Area G: Education/Training will include funding for the state and LPHA personnel.

Timeline:
DHSS Center for Emergency Response/Terrorism positions:
      May 2002 – June 2002   Develop Center job descriptions and positions
      July 2002 – Aug. 2002   Interview and complete selection of personnel for positions
         August 31, 2002   Obligate all budgeted dollars for the positions (Timelines of activities of Center/positions in assessment and planning are provided in remaining Critical Capacities descriptions)
LPHA Regional Response Planner positions:
      May 2002 – June 2002   Develop Regional Response Planner contracts with contract deliverables (including required outcomes for the Contracts and Planner job descriptions)

July 2002 – Aug. 2002	Contract with local public health agencies for 31 Regional Response Planners
August 31, 2002	Obligate all budgeted dollars with local public health agencies for the 31 Regional Response Planner contracts
Sept. 2002 – Oct. 2002	LPHAs hire Regional Response Planners
Nov. 1, 2002	31 Planners in place statewide in the nine Missouri planning regions. (Timelines of activities of Planners in assessment and planning are provided in remaining Critical Capacities descriptions)

Bioterrorism Preparedness Strategic Direction, Coordination and Assessment Activities:

March 2002	Missouri's Bioterrorism Preparedness Committee appointed
March – April 2002	Committee meets to review grant proposal development, budget allocation and to develop the final grant applications for submission to Governor Holden
April 8, 2002	Committee presents recommended grant applications to Governor and secures letters of support from agencies
April 11, 2002	CDC and HRSA bioterrorism preparedness grants mailed to federal agencies
April 15, 2002	Copies of grant applications presented to Missouri General Assembly
April 2002	DHSS meets with surrounding states
May 2002 – June 2002	Committee reviews existing membership/adds members
June 2002	Focus Areas develop Advisory Committees
June 2002	DHSS sponsors statewide conference on Bioterrorism Preparedness
July 2002 – Jan. 2003	Focus Area Advisory Committees meet
	July 2002, Oct 2002, Jan.2003, April 2003, July 2003 Bioterrorism Preparedness Committee holds quarterly meetings to review progress of planning; evaluation of process; contract deliverables
Jan. 2003	Bioterrorism Preparedness Committee issues annual report on bioterrorism preparedness
April 2003	Bioterrorism Committee reviews adequacy of Committee representation, effectiveness of process for bioterrorism preparedness, recommends changes to Committee/process as needed
July 2003	Bioterrorism Preparedness Committee reviews progress of grants, recommends changes as needed

Measurable Milestones:

Evaluation of progress will include the following:
- Capacity in DHSS and LPHA has been increased with added personnel within the Center for Emergency Response/Terrorism and 31 Regional Response Planners at LPHA level.
- Funding has been obligated on schedule.
- Regional bioterrorism planning has been implemented.
- Contracts have been fulfilled.
- DHSS has provided regular communications with the Governor's Office and the Missouri General Assembly on preparedness activities.
- LPHAs and the Regional Response Planners have communicated regularly with their local governing boards and local elected officials.
- Missouri's Bioterrorism Preparedness Committee has met quarterly, reviewed and evaluated progress, and provided annual reports to elected officials and the public regarding preparedness activities.
- Focus Area Advisory Committees have been established and met as planned.
- Statewide Bioterrorism Conference held in June 2002.

ATTACHMENT – CDC & HRSA GRANT ADVISORY COMMITTEE (Critical Benchmark #2)

BIOTERRORISM PREPAREDNESS COMMITTEE

NAME	TITLE/ORGANIZATION
Susan Jenkins	Director, Center for Emergency Response/Terrorism, DHSS
Nancy Bush	Assistant Director, Center for Emergency Response/Terrorism, DHSS
Rebecca Miller	Vice President for Quality & Regulatory Advocacy, MO Hospital Association (representing all hospitals in Missouri)
Joseph Pierle	Executive Officer, Missouri Primary Care Association
Tom Mohr	Public Safety Manager, Missouri State Emergency Management Agency
Charles Jackson	Director, Department of Public Safety
William Farr	State Fire Marshal, Department of Public Safety
Mary Jo Everhart	Administrator, Platte County Health Department (Chair of Local Public Health Advisory Committee)
Gil Copley	Administrator, St. Charles County Department of Community Health & the Environment (Chair of Missouri Association of Local Public Health Agencies)
Jacquelynn Meeks	Administrator, St. Louis County Department of Health (Missouri's local public health agency with largest population)
Rex Archer	Administrator, Kansas City Health Department (representing NACCHO)
Carey Smith	Deputy Director, Division of Health Standards & Licensure, Representing State Emergency Medical System
Bryant McNally	Director, Center for Health Improvement, DHSS (representing Office of Rural Health)
Tricia Schlechte	Deputy Director, Health & Public Health, DHSS (representing ASTHO)
Jerry Simon	Deputy Director, Senior Services & Regulation, DHSS
Mahree Skala	Director, Center for Local Public Health Services, DHSS
Dante Gliniecki	Statewide Volunteer Coordinator, SEMA

FOCUS AREA A: PREPAREDNESS PLANNING AND READINESS ASSESSMENT

I.   STRATEGIC DIRECTION, COORDINATION, AND ASSESSMENT:

B. Critical Capacity: To conduct integrated assessments of public health system capacities related to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies to aid and improve planning, coordination, and implementation.

Description of Existing Capacity:

At both the state and local levels, limited bioterrorism planning and assessment has occurred within existing resources and most often as an adjunct to the original responsibilities of staff. Integrated regional planning on a statewide basis has not occurred and there is no existing staff capacity to adequately carry out this task. An integrated assessment of the public health system capacities related to bioterrorism has not occurred.

Assessment of Adequacy of Current Capacity:

Current capacity is not adequate at either the state or local public health level to meet the critical capacity requirements for bioterrorism preparedness planning and readiness assessment.

Missouri state and local public health agencies need added personnel dedicated to the task of preparedness planning and readiness assessment. Missouri needs public health personnel whose sole work is focused on the tasks of: assessing the capacity and capability of the public health system; assuring that response plans are in place; assuring that training and exercises are being conducted and that everyone knows and can execute their needed tasks; and assuring that continual assessment/evaluation and refinement of bioterrorism planning is occurring. The current system of assigning emergency planning activity as adjunct responsibilities does not create the needed capacity to assure preparedness.

Proposal for Effecting Improvements with Objectives:

Missouri's proposed implementation/improvement plan to meet all the critical capacities of Focus Area A: Preparedness Planning and Readiness Assessment relies on the increased capacity at the state and local public health levels as detailed in Focus Area A I. Strategic Direction, Coordination, and Assessment: Critical Capacity A (increased staffing in DHSS's Center for Emergency Response/Terrorism; increased staffing for LPHAs through the 31 Regional Response Planners; Missouri's Bioterrorism Preparedness Committee).

Based on the plan detailed in Critical Capacity A of Focus Area A, the following improvement plan for assessment of the public health system capacities related to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies is proposed.

Objective 1: To conduct integrated assessments of the public health system capacities related to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies to aid and improve planning, coordination, and implementation.
- The DHSS Center for Emergency Response/Terrorism, in conjunction with other public health officials, will develop an assessment process (based on National and Public Health Performance Standards) to be used at the state level by DHSS and at the regional and local level by the LPHA Regional Response Planners;

- DHSS will use the assessment process to determine the department's capacity/capability related to bioterrorism, other infectious disease outbreaks, and other public health threats.
- The LPHA Regional Response Planners will be responsible for using the assessment process to conduct the integrated assessment of the regional and local public health system capacities related to bioterrorism, other infectious disease outbreaks, and other public health threats.
- Results of the integrated assessments of the public health systems capacities will be presented to the Missouri Bioterrorism Preparedness Committee, as well as to local and state elected officials responsible for oversight of public health agencies, with recommendations for improvements.

Objective 2: To assess statutes, regulations, and ordinances within the state and local public health jurisdictions to ensure that emergency public health measures can be executed:
- The DHSS has completed a review of the state statutes and regulations to ensure that public health measures can be executed.
- The DHSS has completed a review of state statutes and regulations in comparison to the proposed Model State Emergency Health Powers Act developed for the Centers for Disease Control and Prevention:
  - Based on the reviews, DHSS has worked with the Governor's Office and legislators in the Missouri General Assembly (chairs of Senate Public Health and Welfare Committee and Senate Aging, Families and Mental Health Committee and House Children, Families and Health Committee) to develop legislation adding a definition of bioterrorism, providing temporary licensure for medical professionals from other states to practice in Missouri during a declared disaster, and addressing several other areas in Missouri's statutes. The legislation is being considered in the current Second Regular Session of the 91st Missouri General Assembly; and
  - DHSS met in Kansas City on April 4 and 5, 2002, with representatives from Missouri's eight surrounding states, the Milbank Foundation, and the Centers for Disease Control and Prevention to review the ability of states to respond and coordinate between the states during an emergency. Select legislators (chairs of public health committees), state health department directors and their general counsels along with CDC representatives examined the statutory and regulatory provisions needed to enable response across state boundaries. Arizona and Wisconsin sent legislators to observe so that they can conduct a similar meeting of their border states.

Timeline:

Timeline for the assessment of emergency preparedness and response capacity/capability (Critical Benchmark #3).

Aug. 2002 – Oct. 2002:	The DHSS Center for Emergency Response/Terrorism, in conjunction with other public health officials, develops an assessment process (based on National and Public Health Performance Standards)
Nov. 2002 – May 2003:	DHSS staff use assessment process to determine DHSS capacity/capability:
Nov. 2002 – May 2003:	LPHA Regional Response Planners use assessment process to determine LPHA and regional capacity/capability
May 2002 – July 2003:	Results of assessment presented to Missouri Bioterrorism Preparedness Committee, and governing bodies of public health agencies with recommendations for improvement

Timeline for the assessment of statutes, regulations, and ordinances within the state and local public health jurisdictions that provide for credentialing, licensure, and delegation of authority for executing emergency public health measures, as well as special provisions for the liability of healthcare personnel in coordination with adjacent states. (Critical Benchmark #4).

Sept. 2001:	The DHSS Office of Legal Counsel completed a review of the Missouri statutes and regulations to ensure that public health measures can be executed in the state.
Dec. 2001 – Jan. 2002:	The DHSS Office of Legal Counsel conducted a review of Missouri statutes and regulations in comparison to the proposed Model State Emergency Health Powers Act developed for the Centers for Disease Control and Prevention.
Jan. 2002 – May 2003:	DHSS staff worked with the Governor's Office and legislators in the Missouri General Assembly (chairs of Senate Public Health and Welfare Committee and Senate Aging, Families and Mental Health Committee and House Children, Families and Health Committee) to develop legislation adding a definition of bioterrorism, providing temporary licensure for medical professionals from other states to practice in Missouri during a declared disaster, and addressing several other areas in Missouri's statutes. The legislation is being considered in the current Second Regular Session of the 91st Missouri General Assembly.
April 4 and 5, 2002:	DHSS met with representatives from Missouri's eight surrounding states, the Foundation, and the Centers for Disease Control and Prevention to review the ability of states to respond and coordinate between the states during an emergency. Select legislators (chairs of public health committees), state health directors and their general counsels along with CDC representatives examined the statutory and regulatory provisions needed to enable response across state boundaries. Based on this analysis, any further legislation will be developed to add to the current bioterrorism legislation pending before the 91st General Assembly or will be developed in the fall of 2002 for consideration during the 92nd Missouri General Assembly.

Measurable Milestones:

- Evaluation of progress will include the following:
- Successful development of an integrated assessment process;
- Completed assessment by DHSS of state capacity/capability; and completed assessments by the 31 LPHA Regional Response Planners of the regional and local capacity/capability;
- Completed analysis of statutory/regulatory provisions needed to enable response across state boundaries and development of draft legislation, if needed; and
- Reports of assessment presented to the Missouri Bioterrorism Preparedness Committee and appropriate public health governing bodies.

FOCUS AREA A: PREPAREDNESS PLANNING AND READINESS ASSESSMENT

II. PREPAREDNESS AND RESPONSE PLANNING

A. Critical Capacity: To respond to emergencies caused by bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies through the development and exercise of a comprehensive public health emergency preparedness and response plan.

Description of Existing Capacity:

At both the state and local levels, limited bioterrorism planning and exercise of emergency plans has occurred within existing resources and most often as an adjunct to the original responsibilities of staff. Integrated regional plans for bioterrorism response throughout the state have not been developed and therefore have not been exercised on a regional level to assess preparedness.

Assessment of Adequacy of Current Capacity:

Current capacity is not adequate at either the state or local public health level to meet the critical capacity requirements for bioterrorism preparedness planning and exercise of emergency plans.

Missouri state and local public health agencies need added personnel dedicated to the task of preparedness planning, training and execution of plans – public health personnel who have as their sole work focus the task of assuring that response plans are in place, training and exercises are being conducted to assure that everyone knows and can execute their needed tasks, and that continual assessment/evaluation and refinement of bioterrorism planning is occurring.

Proposal for Effecting Improvements with Objectives:

Missouri's proposed implementation/improvement plan to meet all the critical capacities of Focus Area A, Preparedness Planning and Readiness Assessment, relies on the increased capacity at the state and local public health levels as detailed in Focus Area A I. Strategic Direction, Coordination, and Assessment: Critical Capacity A (increased staffing in DHSS's Center for Emergency Response/Terrorism; increased staffing for LPHAs through the 31 Regional Resource Planners; and establishment of Missouri's Bioterrorism Preparedness Committee).

Based on the plan detailed in Critical Capacity A of Focus Area A, the following improvement plan for development of a statewide plan for responding to incidents of bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies is proposed.

Objective 1: To develop a statewide plan for responding to incidents of bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.

- The DHSS Emergency Response Plan, currently in draft and editing stage, will be evaluated.
- Based on the evaluation, improvements to the plan will be implemented, and a State Plan developed.
- A process for continual review, evaluation and updating of the State Plan will be developed by DHSS.
- At least monthly, DHSS division/center director management meetings will focus on the State Plan and responsibilities of the divisions/centers.

- Job descriptions within the DHSS divisions/centers will include, where appropriate, the responsibilities for emergency response and planning identified in the State Plan.
- The DHSS Center for Emergency Response/Terrorism will facilitate and provide direction for updating and exercising the State Plan to assure preparedness.
- The State Plan will be exercised on an annual basis to demonstrate proficiency in responding to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.
- The State Plan, as well as evaluations following exercises of the Plan, will be presented to the Missouri Bioterrorism Preparedness Committee for evaluation, and to assure coordination with other emergency preparedness and response plans and activities. The Missouri Bioterrorism Preparedness Committee, established under Critical Benchmark #2, will provide strategic leadership, direction, coordination and assessment of the plan at a high level of oversight to ensure that progress is being made, coordination is occurring between public health bioterrorism planning and other emergency planning activities, and that evaluation is resulting in any needed revisions to the plan/process.
- The Missouri Bioterrorism Preparedness Committee, also overseeing the HRSA Hospital Bioterrorism Preparedness grant, will also ensure interface among the public health system, hospitals, the medical community and others to coordinate delivery of critical health services and effective medical management in emergencies. The DHSS Emergency Response/Terrorism Center's Medical Consultant will have responsibility for coordination/collaboration between the public health and health care systems as well as training, protocol and other bioterrorism preparedness activities that are shared responsibilities of the public health and health care systems.
- A system for 24/7 notification or activation of the public health emergency response system will be established and maintained (see Focus Area E, Critical Benchmark #12).

Objective 2: To develop regional plans for responding to incidents of bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.

- The DHSS Center for Emergency Response/Terrorism Regional Response Planning manager positions will have responsibility for facilitating the regional planning process and assuring that LPHA Regional Response Planners are developing regional bioterrorism response plans and exercising them annually at the regional level.
- The Center for Emergency Response/Terrorism Regional Response Planning managers will develop a Regional Response Planning Committee, to include all 31 LPHA Regional Response Planners.
- The Regional Response Planning Committee will meet at least twice annually to share assessments and planning actions of the regions and develop cross-region connections for bioterrorism response and planning.
- The Center for Emergency Response/Terrorism Regional Response Planning managers will provide monthly electronic communications to the LPHA Regional Response Planners to assure coordination and collaboration among the regions.
- The LPHA Regional Response Planners will have responsibility for bringing together their regions' local public health and other agencies – including those developing the hospital bioterrorism response plans – needed to develop a regional bioterrorism plan; developing the regional plans; conducting exercises to demonstrate proficiency in response to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies at the regional level.
- LPHA Regional Response Planners, in conjunction with local public health administrators, will present the plans and results of the exercises to the appropriate public health governing boards.
- Local public health agencies will establish and maintain a system for 24/7 notification of the public health system that is integrated with the DHSS system.

- Each local public health agency will identify an emergency response coordinator as part of their participation in the Regional Response Planner contracts.
- Each local public health agency will participate in the regional bioterrorism plan development and exercise of plans as part of their participation in the Regional Response Planner contracts.

Timeline:

Timeline for development of a statewide plan for responding to incidents of bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies (Critical Benchmark #5).

June 2002 – July 2002:	The DHSS statewide Emergency Response Plan, currently in draft and editing stage, will be evaluated
July 2002 – Aug. 2002:	Based on the evaluation, improvements to the plan will be implemented, and a State Plan developed
July 2002 – Aug. 2002:	A process for continual review, evaluation and updating of the State Plan will be developed by DHSS; Beginning in July 2002 and at least once monthly thereafter, DHSS division/center director management meetings will focus on the State Plan and responsibilities of the divisions/centers
July 2002:	Job descriptions within the DHSS divisions/centers will be amended to include, where appropriate, the responsibilities for emergency response and planning
Aug. 2002 – Oct. 2002:	State plan will be adapted into electronic format, with capability of staff to access through discs or web site; ability to enter job title and immediately retrieve State plan responsibilities
Aug. 2002 – March 2003:	Establish Memorandum Of Understanding (MOU) or Mutual Aid Agreements (MAA) as needed based on meetings with surrounding states, assessments, regional planning, exercise of National Pharmaceutical Stockpile (NPS), and HRSA Hospital Bioterrorism planning
July 2003:	Conduct tabletop excercise using the State Plan to demonstrate proficiency in responding to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies
July 2003:	Evaluate tabletop exercise to improve the State Plan and provide proficiency in responding to bioterrorism
July 2003:	Evaluations following tabletop exercise, will be presented to the Missouri Bioterrorism Preparedness Committee for evaluation, and to assure coordination with other emergency preparedness and response plans and activities
Aug. 2003:	A simulated exercise of the State Plan, which will include the State Emergency Management Agency and other emergency planning entities, will be conducted to demonstrate proficiency and to determine additional needed improvements to the plan. Regional response will be incorporated into the simulated exercise

Timeline for development of regional plans for responding to incidents of bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies (Critical Benchmark #6).

May 2002 – June 2002:	Develop Medical Consultant, Regional Response Planning Manager, and CDC Terrorism Grant Coordinator job descriptions and positions
July 2002 – Aug. 2002:	Interview and complete selection of personnel for positions; hire Medical Consultant, Regional Response Planning managers and CDC Terrorism Grant Coordinator
May 2002 – June 2002:	Develop LPHA Regional Response Planner contracts with contract deliverables (including required outcomes for the Contracts and Regional Response Planner job descriptions)
July 2002-Aug.2002:	Regional Response Planning managers develop assessment tool for use within the nine regions
July 2002 – Aug. 2002:	Contract with local public health agencies for 31 Regional Response Planners
August 31, 2002:	Obligate all budgeted dollars with local public health agencies for the 31 Regional Response Planner contracts
Aug. 2002—Sept. 2002:	LPHAs hire Regional Response Planners
Oct. 2002:	31 Regional Response Planners in place statewide in the nine Missouri planning regions
Nov. 2002—Dec. 2002:	The DHSS Center for Emergency Response/Terrorism Regional Response Planning managers meet with LPHA Regional Response Planners to provide training, present the assessment process to be used in the regions and facilitate the regional planning process
April 2003 and July 2003:	The Regional Response Planning Committee will meet to share assessments and planning actions of the regions and develop cross-region connections for bioterrorism response and planning
Monthly beginning Jan. 2003:	The DHSS Center for Emergency Response/Terrorism Regional Response Planning managers will provide monthly electronic communications to the 31 LPHA Regional Response Planners to assure coordination and collaboration among the regions
Jan. 2003 – Feb. 2003:	The LPHA Regional Response Planners use assessment tool to assess regions' capacities and to bring together regions' local public health and other agencies needed to develop a regional bioterrorism planning process
March 2003 – June 2003:	Initial regional bioterrorism plans developed
June 2003:	Tabletop exercises conducted in each region on the initial regional plans to improve planning process and proficiency in response to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies at the regional level
August 2003:	LPHA Regional Response Planners, in conjunction with local public health administrators, present the plans and results of the exercises to the appropriate public health governing boards

Measurable Milestones:

Evaluation of progress will include the following:
- Completion by DHSS of State Response Plan.
- Implemented process for continual review, evaluation and updating of the State Plan by DHSS.
- Monthly discussions at a DHSS division/center director management meeting on the State Plan and responsibilities of the divisions/centers.
- Job descriptions within the DHSS divisions/centers amended to include, where appropriate, the responsibilities for emergency response and planning.

- Exercise of the State Plan to demonstrate proficiency in responding to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.
- Presentation of the state-wide plan, as well as evaluations following exercising the plan, to the Missouri Bioterrorism Preparedness Committee and to appropriate public health governing bodies.
- DHSS Center for Emergency Response/Terrorism Regional Response Planning managers having met with LPHA Regional Response Planners to provide training, present the assessment process to be used in the regions and facilitated the regional planning process.
- Meetings in April 2003 and July 2003 of the Regional Response Planning Committee to share assessments and planning actions of the regions and develop cross-region connections for bioterrorism response and planning.
- Bioterrorism planning meetings held in each of the nine regions' with appropriate local public health and other agencies to develop regional bioterrorism planning processes.
- Initial regional bioterrorism plans developed by each of the nine regions.
- Tabletop exercises conducted in each of the nine regions on the initial regional plans; and
- Presentations of the initial regional plans and assessments of the exercises to appropriate public health agency governing boards in the nine regions.

FOCUS AREA A: PREPAREDNESS PLANNING AND READINESS ASSESSMENT

II. PREPAREDNESS AND RESPONSE PLANNING

B. **Critical Capacity:** To ensure that state, local and regional preparedness for and response to bioterrorism, other infectious outbreaks, and other public health threats and emergencies are effectively coordinated with federal response assets.

Description of Existing Capacity:

The Department of Health and Senior Services (DHSS) has worked closely with federal partners, as well as with other partners on the state and local level, to ensure preparedness and response. In coordinating with federal response assets, DHSS has developed relationships with various federal agencies. Missouri was the first state to sign a Memorandum of Understanding with the FBI (1999) and agreed to join forces in the investigation of crimes where the use of chemical or biological agents that could affect the public health and safety of Missouri citizens is suspected. The Missouri State Public Health Laboratory currently conducts testing for the FBI in suspect bioterrorism events and is part of the national bioterrorism response network. In December 2000, the FBI presented DHSS with a special award for the department's efforts in supporting law enforcement and addressing counter-terrorism. Other partners include CDC, FEMA, HHS, DOJ, EPA, DOE and Department of Defense.

In 2001, prior to the events on September 11, DHSS hosted Col. John Barrett, US Army Medical Research Institute on Infectious Diseases, to present on terrorism and responding to terrorism. In addition, trainings were conducted for media workers in Kansas City and St. Louis to inform them of public health's responsibilities in the event of a chemical or terrorism attack and how public health can work with the media in these types of events.

DHSS has participated for several years with over fifty other agencies – including branches of the armed forces, federal agencies, fire associations and police departments – on the federal InterAgency Board for Equipment Standardization and InterOperability. The Board has six subgroups, with DHSS participating on the Medical SubGroup, charged with ensuring standardization and interoperability throughout the response community. The Attorney General of the United States sanctioned the creation of the board in 1998.

DHSS also works closely with Missouri's State Emergency Management Agency in emergency preparedness. The agencies have conducted joint exercises and developed plans together to delineate the unique roles of our agencies in bioterrorism response and preparedness, as well as in responding to other emergencies within the state.

Missouri's governmental public health system consists of the Missouri Department of Health and Senior Services (DHSS); and 114 Local Public Health Agencies (LPHAs), which are locally governed. The state and local public health agencies are key in the process for conducting the bioterrorism preparedness and response planning, assessing the level of readiness, providing direction for the bioterrorism response, and coordinating with federal responses.

Current capacity for bioterrorism planning and assessment at the state level consists of two existing staff in the DHSS Emergency Response/Terrorism Unit (one medical epidemiologist and an emergency coordinator) and borrowed time and capacity from other staff who have existing job responsibilities other than bioterrorism planning, assessment and direction.

Current capacity for bioterrorism planning and assessment at the LPHAs' level varies tremendously from no to little capacity in small agencies to higher levels in agencies primarily in the greater population areas

of the state. Even in larger metropolitan areas, the LPHAs current capacity for staff with primary job responsibilities in the area of bioterrorism planning and assessment is inadequate.

Assessment of Adequacy of Current Capacity:

Current capacity is not adequate at either the state or local public health levels to meet the critical capacity requirements for bioterrorism preparedness planning, readiness assessment and response. At both the state and local levels, bioterrorism planning and assessments have occurred within existing resources and most often as an adjunct to the original responsibilities of staff. Integrated regional planning on a statewide basis has not occurred. There is no existing staffing capacity to adequately carry out this task.

In reference to effectively managing the CDC National Pharmaceutical Stockpile (NPS) for instance, a number of recommendations were noted during the development of the interim plan that address and describe the capacity that exists at the state and local levels to adequately provide a mass prophylaxis activity. Areas in which improvement is needed include:

- Provide training to DHSS staff on the components and management of the NPS to staff given responsibilities in the Interim plan.
- Provide training on the components and management of the NPS to local and regional governments.
- Set standards for treatment of first responders and their families, high-risk populations, individual verses family dispensing, and the "worried well".
- Establish a system to track pharmaceuticals sent to various dispensing sites, pharmaceuticals dispensed to the public, and tracking including follow-up.
- Assist the LPHAs in their capacity in establishing their role as the local public health authority with their Local Emergency Planning Committee (LEPC).
- In conjunction with the Missouri General Assembly, Board of Pharmacy, Board of Healing Arts, and Board of Nursing, participate in a statewide approach in dispensing and administering NPS pharmaceuticals.
- Establish Memorandum Of Understanding (MOU) or Mutual Aid Agreement (MAA) examples for the LPHAs, LEPCs, and MMRS teams.
- Conduct statewide exercise, with the State Emergency Management Agency (SEMA), the two MMRS teams, LEPCs, and CDC, on the interim plan (NPS management).

Rural local public health agencies describe a lack of the following capacities: storage facilities to house the 12-Hour Push Package, staff and volunteers to adequately dispense large quantities of pharmaceuticals at various dispensing sites, active involvement or organization of their LEPC, and lack of collaboration of their LEPC with the LPHA.

Proposal for Effecting Improvements with Objectives:

In order to accomplish the critical capacity as outlined in this cooperative agreement, the Department of Health and Senior Services will need staff specifically assigned to the issues of NPS management. The position will have a joint assignment to coordinate both the HRSA Hospital Bioterrorism grant and NPS activities. The Coordinator, working through the Regional Response Planning managers, will coordinate the NPS management at the state and local levels, oversee training offered by the department, coordinate NPS preparation activities among other state and local agencies (including two exercises, one to address the metro issues and one the rural issues), establish forms and set standards for NPS management, collaborate with licensing entities to discuss legal authority, and communicate with adjacent states and CDC to ensure the NPS is coordinated statewide with external partners.

Objective 1: Develop an interim plan to receive and manage items from the National Pharmaceutical Stockpile, including mass distribution of antibiotics, vaccines, and medical material. Within this interim plan, identify personnel to be trained for these functions. (Critical Benchmark #7)

See Critical Benchmark #7 on page 26.

Objective 2: Ensure that all preparedness and response planning is coordinated within the existing emergency management infrastructure that is facilitated and supported by the Federal Response Plan, Metropolitan Medical Response System, disaster medical assistance teams, mortuary assistance teams, and hospital preparedness planning.

Collaboration/coordination will be assured through the following activities:
- The Bioterrorism Preparedness Committee will provide strategic leadership and guidance on the CDC and HRSA grants, as well as coordination with other emergency planning grants and with systems (hospitals, EMS, community health clinics, volunteer organizations, etc.) that are integral to bioterrorism planning, preparedness and response. The Bioterrorism Preparedness Committee will meet in May/June of 2002 to examine other areas for added representation. Areas that will be considered include, but are not limited to, the following: state agriculture, mental health, and education departments; public health university programs; and representation of the two MMRS in Missouri. Also, the Committee will provide an evaluation function to ensure that progress is being made, coordination is occurring between public health bioterrorism planning and other emergency planning activities, and that evaluation of progress is resulting in revisions to the plan/process.
- An NPS Management Council will be established to consult on the CDC's NPS guideline, participate in the exercise, and provide feedback on the management of the NPS. To assure a unified statewide approach to the NPS, the council members will consist of both metro and rural representatives, as well as representatives from state organizations dedicated to terrorist response and federal partners (including the Region VII Emergency Coordinator, OPHS/OEP and the federal CDC personnel charged with working with this region on the National Pharmaceutical Stockpile Program)
- The regional bioterrorism plans will require interagency collaboration and preparation for bioterrorism as a condition of fulfilling the grant.

Objective 3: Participate in regional exercises conducted by federal agencies.

- The Hospital Bioterrorism Grant/NPS Coordinator will organize two on-site statewide exercises per year involving activation of the 12-Hour Push Package. A tabletop exercise and planning session with SEMA and DHSS staff will be held prior to an actual on-site exercise. The first on-site exercise will test response at a metro level and the second at the rural level. Representatives from each of the nine regions will participate in both the metro and rural exercises. After each exercise a debriefing session will be held to evaluate the exercise, discuss lessons learned, review existing policy, and determine potential gaps in the management of the NPS.
- Missouri will participate in regional exercises conducted by federal agencies to assure that the NPS plan works in instances that cross state boundaries.

Timeline:

May 2002 – June 2002:	Develop Center job descriptions and positions (including NPS Coordinator):
July 2002 – Aug. 2002:	Interview and complete selection of personnel for positions;
August 31, 2002:	Obligate all budgeted dollars for the positions.
June 2002:	Appoint members of NPS Management Council

June 2002:	Annual bioterrorism conference
July 2002:	Develop needs assessment and disseminate electronically
Aug. 2002:	Conduct follow-up interviews for needs assessment
Aug. 2002:	Identify all five storage sites
Aug. 2002:	First NPS Management Council meeting
Sept. 2002:	Begin regional training sessions for NPS management
July – Sept. 2002:	Develop RFPs for contracts: exercise scenario; exercise facilitator
Oct. – Nov. 2002:	Select contractors
Nov. 2002:	Second NPS Management Council meeting
Dec. 2002:	Table top exercise with SEMA
Feb. 2003:	Metro exercise and evaluation
March 2003:	Third NPS Management Council meeting
March 2003:	Distribution of NPS readiness response kits
June 2003:	Fourth Management Council meeting
Aug. 2003:	Rural exercise and evaluation
Aug. 2003:	Conduct follow-up needs assessment to determine improvements in the state and local public health agencies' capacity to efficiently and effectively provide mass prophylaxis activities on a regional and statewide level

Measurable Milestones:

The following activities will be used to evaluate the objectives in the work plan.
- Hospital Bioterrorism Grant/NPS Coordinator position filled.
- Funding has been obligated on schedule.
- NPS Management Council has been established and meetings held.
- Needs assessment has been completed.
- Five storage sites have been identified.
- Training sessions have been held.
- NPS Plan has been exercised in accordance with proposed timeline.
- Statewide Bioterrorism Conference held in June 2002.
- Follow-up needs assessment conducted

FOCUS AREA A: PREPAREDNESS PLANNING AND READINESS ASSESSMENT

III. NATIONAL PHARMACEUTICAL STOCKPILE PREPAREDNESS

A. Critical Capacity: To effectively manage the CDC National Pharmaceutical Stockpile (NPS), should it be deployed, translating NPS plans into firm preparations, periodic testing of NPS preparedness, and periodic training for entities and individuals that are part of NPS preparedness.

Description of Existing Capacity:

The Department of Health and Senior Services (DHSS) is committed to the objective of assuring that life-saving pharmaceuticals and medical supplies are available to the public in order to reduce morbidity and mortality in the event of terrorism. Over three-dozen domestic and international extremist groups that have the potential of carrying out a terrorist threat have been identified in Missouri. In March 2001 the DHSS began planning to develop an infrastructure for the effective management and use of the NPS. By July 2001, the DHSS organized a statewide group of individuals from state and local emergency response organizations to address this issue.

Immediately after September 11, 2001, in order to provide a proactive approach in the identification, tracking, and communication of a bioterrorism/chemical event, the DHSS converted its existing surveillance system to a High Alert Surveillance System (HASS). This system is designed for Local Public Health Agencies (LPHAs) to collect 24-hour syndromic information from community partners such as local hospitals, childcare facilities, schools, etc. The DHSS staff analyzes the information on a daily basis to determine potential public health threats and the need for a mass prophylaxis activity.

Missouri's Integrated Information System (Missouri Health Strategic Architectures and Information Cooperative-MOHSAIC) currently has an inventory component that meets the requirements for tracking of vaccines and other biologicals. This component is available statewide to all LPHAs. It tracks vaccines received by the agency and the doses administered to an individual. The system can support tracking of inventory at the local, regional and statewide levels. Missouri proposes to enhance this inventory component to support the receipt, transfer and administration of biological and other commodities included in the NPS.

The DHSS will be responsible to recommend the activation of the NPS to the Governor. If the NPS is deployed to Missouri, upon arrival the DHSS will sign for receipt of the NPS. Staff from the DHSS will remain on-site at the storage site in a consultant role. Local response teams have been identified to be responsible in the repackaging, dispensing, and recovery of the NPS. The Missouri State Emergency Management Agency (SEMA) has been identified to be responsible to assure transportation to distribution sites, security of NPS, crowd control, and training of volunteers.

The DHSS is the lead agency in building a statewide infrastructure to distribute and manage the NPS. Current capacity required to lead the continuous discussion and monitoring of a statewide approach consists of one public health manager in adjunct to other full-time duties.

Current capacity for bioterrorism planning and assessment at the LPHA level varies tremendously from no to little capacity in small agencies to higher levels in agencies primarily in the greater population areas of the state. Even in larger metropolitan areas, the LPHAs' current capacity for staff with primary job responsibilities in the area of bioterrorism planning and assessment is not adequate. The local capacity also varies with each county Local Emergency Planning Committee (LEPC) and their Emergency Management Organizations (EMOs). The counties are part of an overall operation plan that addresses emergency response; these plans are either single or multi-county. In addition, there are two Metro Medical Response

Systems (MMRS) located in St. Louis and Kansas City and five regional enhanced HAZMAT Teams with an additional of twelve planned for the future.

Assessment of Adequacy of Current Capacity:

The Interim Mass Prophylaxis Plan (Critical Benchmark #7) provides the framework for how DHSS will collaborate with other state, local, and federal agencies to get critical pharmaceuticals to the public in the event of a terrorism attack or other agents causing a public health threat. A number of recommendations were noted during the development of the plan that address and describe the capacity that exists at the state and local level to adequately provide a mass prophylaxis activity. Areas in which improvement is needed include:

- Provide training of the components and management of the NPS to DHSS staff given responsibilities in the interim plan.
- Provide training of the components and management of the NPS to local and regional governments.
- Set standards for treatment of first responders and their families, high-risk populations, individual versus family dispensing, and the "worried well."
- Establish a system to track pharmaceuticals sent to various dispensing sites, pharmaceuticals dispensed to the public, and tracking of individuals treated including follow-up.
- Assist the LPHAs in their capacity to establish their role as the local public health authority with their LEPC.
- In conjunction with the Missouri General Assembly, Board of Pharmacy, Board of Healing Arts, and Board of Nursing, participate in a statewide approach in dispensing and administering NPS pharmaceuticals.
- Establish Memorandum Of Understanding (MOU) or Mutual Aid Agreement (MAA) examples for the LPHAs, LEPCs, and MMRS teams.
- Conduct statewide exercise, with the State Emergency Management Agency (SEMA), the two MMRS teams, LEPCs, and CDC, on the Interim plan (NPS management).

Rural local public health agencies describe a lack of the following capacities: storage facilities to house the 12-Hour Push Package, staff and volunteers to adequately dispense large quantities of pharmaceuticals at various dispensing sites, active involvement or organization of their LEPC, and lack of collaboration of their LEPC with the LPHA.

Proposal for Effecting Improvements with Objectives:

In order to accomplish the critical capacity as outlined in this cooperative agreement, the Department of Health and Senior Services will need staff specifically assigned to the issues of NPS management. The position will have a joint assignment to coordinate both the HRSA Hospital Bioterrorism grant and NPS activities. The coordinator, working through the Regional Response Planning managers, will coordinate the NPS management at the state and local levels, oversee training offered by the department, coordinate NPS preparation activities among other state and local agencies (including two exercises, one to address the metro issues and one the rural issues), establish forms and set standards for NPS management, collaborate with licensing entities to discuss legal authority, and communicate with adjacent states and CDC to ensure the NPS is coordinated statewide with external partners.

Objective 1: To determine state and local readiness to provide mass prophylaxis utilizing local pharmaceutical resources during a terrorism event or other public health threat and to identify specific areas that have limited resources.

- Needs Assessment: The NPS Coordinator will develop and implement a needs assessment which will be a written questionnaire delivered to all 114 local public health agencies and to appropriate sections of the DHSS. The questionnaire will determine the pharmaceutical caches of the MMRS for Kansas City and St. Louis region, local health care providers, and state facilities. It will also determine the number of individuals, in each region, that can be treated prior to initiating the NPS. The results will be compiled and shared with the respondents. Subject areas for the needs assessment will include pharmaceutical supplies located at local hospitals, pharmacies, physician offices, and state facilities. It will also include determination of large population areas related to local supplies, capacity of the local response team to implement a prophylaxis activity without state or federal assistance, and what assistance may be needed if they do not have the infrastructure to respond.

Objective 2: To increase capacity of state and local emergency response teams to provide mass prophylaxis to large numbers of individuals during a terrorism event or other public health threat.

- Needs Assessment: In conjunction with the assessment to determine the pharmaceutical supply, the questionnaire will assess the local public health agencies capacity to respond should the NPS be activated in their area, list of agencies with which they have a written MOU, training needs, what supplies and/or technology are needed to support NPS management, and if they have a written plan to manage the NPS. The findings will be used to determine the regions that require additional training, technical support, and assistance in the development of a local plan to manage the NPS.
- Training: Using the capacity information gathered in the needs assessment, the NPS Coordinator will provide orientation and training on the components and management of the NPS, establishment of an MOU among regional agencies, and the integration of county operational plans into a regional plan. The training will be offered to each region initially, then on an as needed basis.
- Annual bioterrorism conference: The June 2002 Bioterrorism Conference will include at least one topic on NPS management.
- Technical Support: Since the NPS could be activated at various sites throughout the state, the DHSS may activate district staff to a local site of a terrorist event. For this reason, in addition to the NPS Coordinator, the DHSS's District Health Directors will be utilized to provide immediate technical support for the local regions in the event of a terrorist event that requires mass prophylaxis. In collaboration with the NPS Coordinator, the District Health Directors will provide information and technical support to the LPHA administrators and their governing entities prior to a terrorist event.

Objective 3: To assure effective and efficient statewide utilization and management of the NPS.

- Management Council: An NPS Management Council will be established to consult on ongoing changes of CDC's NPS guidelines, participate in the exercise, and provide feedback in the management of the NPS. To assure a unified statewide approach to the NPS, the council members will consist of both metro and rural representatives, as well as representatives from state organizations dedicated to terrorism response and federal partners (including the Region VII Emergency Coordinator, OPHS/OEP and the federal CDC personnel charged with working with this region on the National Pharmaceutical Stockpile Program);
- Storage Sites: Storage sites have been identified to receive the 12-Hour Push Package; all sites meet the environmental conditions as stated in the *Guide for Planning the Receipt and Distribution of the CDC NPS*. They are:

- Kansas City – The overhaul base operated by American Airlines at Kansas City, MO International Airport is the identified site. A memorandum of agreement (MOA) between American Airlines and the Kansas City MMRS is currently being written.
- St. Louis – Lambert Airport, St. Louis, MO
- Springfield – Springfield/Branson Regional Airport, Springfield, MO
- Columbia – Pavilion of the Boone County Fairgrounds, Columbia, MO
- Storage site for Popular Bluff has yet to be identified.
- Exercise: The NPS Coordinator will organize two on-site statewide exercises per year involving activation of the 12-Hour Push Package. A tabletop exercise and planning session with SEMA and DHSS staff will be held prior to an actual on-site exercise. The first on-site exercise will test response at a metro level and the second at the rural level. Representatives from each of the nine regions will participate in both the metro and rural exercises. After each exercise a debriefing session will be held to evaluate the exercise, discuss lessons learned, review existing policy, and determine potential gaps in the management of the NPS.
- Readiness response kits: The NPS Coordinator will develop response kits for the five district offices located in areas designated to receive the 12-Hour Push Package, including, Springfield, St. Louis, Kansas City, Poplar Bluff, and Jefferson City. The response kits will include equipment and supplies that will be used at the storage and distribution site should the 12-Hour Push Package be activated, including, ID badges, flashlights, 2-way radios, colored vests, forms, fact sheets, steps for on-site management of NPS, assignments of staff, etc.

Timeline:

May 2002 – June 2002:	Develop Center job descriptions and positions (including NPS Coordinator):
June 2002:	Appoint members of NPS Management Council
June 2002:	Annual bioterrorism conference
July 2002 – Aug. 2002:	Interview and complete selection of personnel for positions
July 2002:	Develop needs assessment and disseminate electronically
Aug. 2002:	Conduct follow-up interviews for needs assessment
Aug. 2002:	Identify all five storage sites
Aug. 2002:	First NPS Management Council meeting
August 31, 2002:	Obligate all budgeted dollars for the positions
Sept. 2002:	Begin regional training sessions for NPS management
July – Sept. 2002:	Develop RFPs for contracts: exercise scenario; exercise facilitator
Oct. – Nov. 2002:	Select contractors
Nov. 2002:	Second NPS Management Council Meeting
Dec. 2002:	Table top exercise with SEMA
Feb. 2003:	Metro exercise and evaluation
March 2003:	Third NPS Management Council meeting
March 2003:	Distribution of NPS readiness response kits
June 2003:	Fourth NPS Management Council meeting
Aug. 2003:	Rural exercise and evaluation
Aug. 2003:	Conduct follow-up needs assessment to determine improvements in the state and local public health agencies' capacity to efficiently and effectively provide mass prophylaxis activities on a regional and statewide level.

Measurable Milestones:

The following activities will be used to evaluate the objectives in the work plan.
- Hospital Bioterrorism Grant/NPS Coordinator position filled.
- Funding has been obligated on schedule.
- NPS Management Council has been established and meetings held.
- Needs assessment has been completed.
- Five storage sites have been identified.
- Training sessions have been held.
- NPS Plan has been exercised in accordance with proposed timeline.
- Statewide Bioterrorism Conference held in June 2002
- Follow-up needs assessment conducted.

Focus Area A: Preparedness Planning and Readiness Assessment

DHSS Increased Capacity/Infrastructure of the Center for Emergency Response/Terrorism

Personnel	Total Salary	Total Salary from CDC Bioterrorism Planning and Response Grant*
Director	$73,000	$36,500
Assistant Director	$63,000	$31,500
Medical Epidemiologist	$103,000	$65,783
Procurement Officer	$47,100	$47,100
Fiscal Manager	$67,500	$67,500
Medical Consultant	$105,000	$52,500
Regional Response Planners (3)	$141,300	$141,300
CDC Grant Coordinator	$60,000	$60,000
Hospital Grant/National Pharmaceutical Stockpile Coordinator	$60,000	$10,000
Health Program Representative (2)	$69,288	$69,288
Executive Secretary	$35,000	$35,000
Clerk IV	$26,460	$26,460
Total Salaries		**$642,931**
Fringe/Indirect Costs		**$563,770**
Total Travel		**$53,750**

Equipment

Equipment		
Equipment for above positions (including computer, phone, desk, chair, file cabinet, etc.)	$3,000 each	$45,000
Cell Phones (5)	$120/month each	$1,440
Pagers (5)	$174/month each	$870
Copy board for Disaster Situation Room (DSR)	$4,000	$4,000
Copy board for conference room	$1,700	$1,700
Chairs for DSR (10)	$300 each	$3,000
Chairs for Conference Room (15)	$300 each	$4,500
Conference Room Table	$800	$800
Fax Machine	$1,670	$1,670
Copier	$8,000	$8,000

Computer Laptops Including		
network capabilities (3)	$4,625	$13,875
Color Network Printer	$5,000	$5,000
Black & White Network		
Printer	$2,000	$2,000
Conference Phone	$1,200	$1,200
General Office Supplies	$5,000	$5,000
Data processing network		
charges for FTE	$2,300 each	$34,500
TOTAL EQUIPMENT		**$156,555**

Contingency emergency funding for LPHAs
   and DHSS (this fund will be used for public
   health emergencies or bioterrorism events to
   reimburse time, equipment, travel, etc. At
   the end of the Grant Award year the   **$433,059**
   funding will be used by LPHAs and DHSS
   to upgrade equipment as needed for
   education and emergency response. This
   funding may also be used for travel that is
   mandated by CDC on short notice for DHSS
   or LPHA staff).

*The remaining portions of the salaries are budgeted from the HRSA Hospital Bioterrorism Preparedness Grant, except for the
  Medical Epidemiologist whose remaining salary is in-kind.

LPHAs Increased Capacity with 31 Regional Response Planners:

Contract Expense

Regional Response Planners (31)—Contract includes equipment
(i.e. computers, cell phone, pager, etc.), travel, desk, phone, etc.
   Total for 31 Planners   **$2,635,000**

LPHA funding to update equipment/supplies (i.e. computers,
   software, pagers, phone systems, etc.)   **$550,000**

State Plan Review/Implementation/Distribution   **$80,000**

Regional Plan Draft/Distribution   **$50,000**

NATIONAL PHARMACEUTICAL STOCKPILE (NPS)

Expense	**Budgeted Amount**	**Totals**
Needs Assessment	$3,000	**$3,000**
Training		
Satellite Uplink	$2,000	

Regional Training (on-site sessions)	$3,000	
Equipment, Materials & Supplies	$3,000	
Total Training		**$8,000**

Exercises

Planning and evaluation meetings	$1,000	
Exercise Development (Contractor)	$7,500	
Exercise Facilitation	$7,500	
Total Exercises		**$18,000**

NPS Management Planning Council (travel and meeting expenses)	$5,000	**$5,000**
NPS Readiness Response Kits (one kit for district health offices)	$5,000	**$5,000**
NPS Inventory Software (Contractual)		**$63,000**

Equipment

Laptop and portable printer (5 - one for each district office)	$2,300 each	$11,500
2-way radio (three per 6 district offices)	$850 each	$5,100
VCR (2)	$250 each	$500
CD Burner (portable, one for every 5 district offices)	$580 each	$2,900
Power cords with surge protector (15', two per six district offices)	$40 each	$480
TOTAL NPS EQUIPMENT		**$20,480**

Total FOCUS A		**$5,285,545**

Page 78 - Focus Area A Budget Information (4 of 5 pages).
Financial Information Forms submitted to CDC (hard copy only).

Page 79 - Focus Area A Budget Information (5 of 5 pages).
Financial Information Forms submitted to CDC (hard copy only).

FOCUS AREA B: SURVEILLANCE AND EPIDEMIOLOGY CAPACITY

I.   PUBLIC HEALTH SURVEILLANCE AND DETECTION CAPACITIES

A. Critical Capacity: To rapidly detect a terrorist event through a highly functioning, mandatory reportable disease surveillance system, as evidenced by ongoing timely and complete reporting by providers and laboratories in a jurisdiction, especially of illnesses and conditions possibly resulting from bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.

Description of Existing Capacity:
The Missouri Department of Health and Senior Services (DHSS) has an after-hours answering service for telephone notification of urgent disease reports (or any other urgent matter), on a 24-hour-per-day, 7-day-per-week basis. A Duty Officer, rotated weekly, is available via pager and cell phone. Call-down lists of state and local personnel responsible for response to disease cases and emergency events are provided to the Duty Officer, and key individuals including district field staff also have pagers and cell phones. For more information, see Critical Benchmark #8.

The local public health agencies (LPHAs) in the three major metropolitan areas (St. Louis, Kansas City, and Springfield) are all available 24/7 through paging services and duty officer systems. Most other LPHAs serving >65,000 population also have systems in place 24/7, through 911 or a dedicated phone number. In the rural areas, availability of LPHA staff after business hours varies considerably by county.

Legal authority to designate reportable diseases and make and enforce rules to prevent their spread is established through state statute and rule. These powers have been reviewed by DHSS Legal Counsel within the past year. The reporting rules designate all conditions reportable to CDC, plus several others, and include 15 diseases/conditions that may result from bioterrorism. The rules also require the reporting of any outbreaks or epidemics. Isolates or positive specimens for 14 diseases (including anthrax and plague) must be submitted to the State Public Health Laboratory (SPHL).

As a condition for receiving Core Public Health Functions contract funds from DHSS, all 114 independent LPHAs participate in the passive and active surveillance systems, investigate disease cases according to DHSS guidelines, and coordinate outbreak investigation activities with DHSS. Each LPHA has designated a trained professional to serve as the primary contact person for these functions.

The passive surveillance system consists of case reports received by LPHAs and DHSS from mandated reporters. Reports received locally are checked for completeness, followed up according to DHSS guidelines, and routed to DHSS. Reports are entered into the Missouri Health Surveillance Information System (MOHSIS) by 71 LPHAs and DHSS staff, for tracking, analysis and reporting to CDC via the National Electronic Disease Surveillance System (NEDSS).

Active syndromic surveillance has been conducted for over ten years in Missouri. In September 2001, DHSS activated the High Alert Surveillance System (HASS) to improve syndromic surveillance and detect biological or chemical terrorism activity more quickly. In total, 663 sites have participated in HASS statewide, including 88 of the state's 144 hospitals and many other acute care settings. Daily data on syndromic illness and information on admissions, ER visits, and absenteeism is collected from the sites three times per week. The data is analyzed daily by the Office of Surveillance, and alerts generated for immediate follow up if an aberration is detected. A weekly feedback report is provided to active sites.

After September 11, 2001, DHSS developed an Emergency Response Data Collection System (ERDCS) as a component of the MOHSAIC information system to track reports and followup activities.

Assessment of Adequacy of Current Capacity:

The largest gaps in around-the-clock LPHA availability exist in the rural areas of the state. Capacities vary widely, and many do not have mechanisms established for staff coverage, or up-to-date communications technology such as pagers or cell phones.

State legal authority for disease reporting is comprehensive, and the rules can be updated on an emergency basis if needed. One gap may be state and local authority to review laboratory, hospital, and other records in order to detect unreported disease cases and/or evaluate the completeness and timeliness of reporting. DHSS has relied on voluntary cooperation to conduct these activities in the past.

The passive disease surveillance system has not recently been systematically evaluated, so the degree of under-reporting and the timeliness of the system are not known except for a few specific diseases (e.g., HIV/AIDS). The system is still largely dependent on labor-intensive, manual processes for transfer of information from health care providers to the local public health agencies.

The active surveillance system, HASS, is only about six months old and evaluation is incomplete. However, the number of participating sites is not as large or representative as desired, and many key providers have not joined the system, citing the expense and difficulty of compiling syndromic data.

The ERDCS requires manual linkage of results from the State Public Health Laboratory (SPHL) and other laboratories, and notification of health care providers of a client's status. Positive laboratory results for reportable conditions need to be electronically linked into MOHSIS.

Proposal for Effecting Improvements with Objectives:

Missouri will develop a statewide public health infrastructure with the capacity to coordinate and evaluate a comprehensive surveillance and response system for disease cases, clusters, outbreaks and potential terrorist events. The DHSS system for receiving and evaluating urgent disease reports on a 24-hours-per-day, 7-day-per-week basis will be enhanced and extended to include all LPHAs. A Regional Rapid Detection and Response Team (RRDRT) will be established in each of the nine designated state planning regions. These teams will include state and local public health staff as well as other medical, infection control, laboratory and hazardous materials experts. As outlined in Focus Area A, an Advisory Committee on Surveillance and Epidemiology will be established. A comprehensive plan for evaluating and improving the disease surveillance system will be developed and implemented in each region.

Objective 1: To improve the existing public health communication system and assure that a system is in place to receive and evaluate urgent disease reports, 24-hours-per-day, 7-days-per-week, throughout the state.

The following activities will be carried out:
- Designate and publicize a toll-free hotline number for after-hours reporting of urgent disease cases and potential bioterrorist incidents, linked to the DHSS answering service and Duty Officer.
- Conduct an assessment to determine existing capacity of all 114 LPHAs for 24/7 receipt of and response to disease reports and potential bioterrorist incidents.
- Using the results of the assessment and based on need, provide funding to LPHAs to acquire necessary communications equipment and assure each LPHA has a duty officer on call 24/7.
- Develop bioterrorism detection and response plans for each region, integrated with the overall regional and state plans (see Focus Area A), which include activation of LPHA personnel to respond to emergencies, including urgent disease reports and potential bioterrorist incidents.

Objective 2: To ensure that the state and local public health agencies have the legal authority to require/ receive reports on and investigate any suspect cases, potential terrorist events, or unusual illness clusters.

DHSS will:
- Request legal opinion to clarify the DHSS authority to review laboratory, hospital, and pharmacy records in order to detect unreported disease cases and/or evaluate the completeness of reporting, and propose any needed rule or statute changes.
- Review applicable local ordinances and propose changes to assure current local legal authority for disease reporting and review of laboratory, hospital, and pharmacy records.

Objective 3: To establish an ongoing system for routine assessment of the timeliness and completeness of the reportable disease surveillance system, especially for naturally occurring illnesses and conditions that may mimic those resulting from a terrorist action.

With guidance from the Bioterrorism Preparedness Advisory Sub-committee on Surveillance and Epidemiology (see Focus Area A), DHSS will develop and implement a routine, statewide system for evaluation of the passive and active surveillance systems. Criteria and methods will be based on the CDC guidelines for evaluating surveillance systems and will include qualitative feedback from key surveillance partners. Primary focus will be placed on the key categories of diseases listed in Objective 5 below. Based on the findings, the workgroup will make recommendations to DHSS and the LPHAs for system improvements.

Objective 4: To ensure there are systems in place to provide ongoing disease surveillance and epidemiology training for public health, clinical, and other healthcare professionals and to develop subject matter expertise within the public health system.

As described in more detail in Focus Area G, Capacity A, Objective 2, DHSS will:
- Train the new LPHA and DHSS staff and other RRDRT members in surveillance and epidemiology, data analysis methods and tools including Epi Info software, and bioterrorism specific content.
- Provide four additional Principles of Epidemiology courses in the next year, to increase the number of LPHA staff who can assist with Focus Area B functions in a public health emergency.
- Support key DHSS and LPHA staff and medical providers to attend advanced surveillance and epidemiology training provided by CDC and the St. Louis University School of Public Health.
- Coordinate with an academic institution to deliver training on decision making and team crisis management for the RRDRTs on a regional basis.
- Assess the training needs of family physicians, infection control professionals, emergency department personnel, health center professionals, first responders and other related professions, and contract with educational institutions to develop and provide the training.
- Provide technical training to three GIS staff members in the use of new GIS software.

Objective 5: To establish an ongoing system to evaluate and improve the timely and complete reporting of outbreaks of illness and/or key categories of cases of reportable diseases, with the input of the local public health agencies.
- The evaluation system described under Objective 3 will focus on the key categories of influenza, invasive bacterial diseases, vaccine preventable diseases, vectorborne diseases, and food- and waterborne diseases. LPHAs will be involved in developing and implementing the system.
- The evaluation process described in II.B, Objective 2 will include an analysis of the timeliness of outbreak detection and completeness of reporting of outbreak-related cases. Results of each post-

outbreak evaluation will be given to the Bioterrorism Preparedness Advisory Sub-committee on Surveillance and Epidemiology.

Objective 6: To assess capacities for monitoring dermatological conditions/rash illnesses and develop plans to improve this component of the surveillance system.

The Advisory Sub-committee (see Objective 3 above) will assess current capacities for monitoring rash illnesses and other dermatological conditions, and develop an improvement plan.

Objective 7: To develop sufficient epidemiologic staffing capacity to manage the reportable disease system at the state and local levels, by adding the following personnel to the public health system:

- Three doctoral-level Consultant Epidemiologists will be hired and stationed in the DHSS district offices in St. Louis, Independence (KC area), and Springfield to serve as the Regional Surveillance and Epidemiology Coordinators for three planning regions each; establish and coordinate a RRDRT in each planning region; and coordinate development and exercise of the epidemiologic investigation and response portions of the regional and statewide plans (Focus Area A). They will work with the Advisory Committee to develop a surveillance evaluation plan and will coordinate evaluation activities in their regions.
- Six Epidemiology Specialists (master's level or equivalent experience), will be hired and stationed in the DHSS district offices in St. Louis, Independence, Macon, Jefferson City, Poplar Bluff and Springfield. They will assist the Consultant Epidemiologists to develop, exercise and maintain proficiency of the RRDRTs; assure that response occurs within defined timeframes and consistent with regional plans; coordinate among RRDRTs serving contiguous area; provide technical assistance and consultation to LPHA staff in the regions; and monitor the surveillance/epidemiology contracts with LPHAs (described below).
- Contracts will be established with 19 LPHAs, including each of the three largest MSAs, to provide a total of 27 epidemiology specialists (master's level or equivalent experience) to cover all counties, to serve on the RRDRTs; provide information/technical assistance to mandated disease reporters; carry out surveillance evaluation activities; participate in regional bioterrorism planning, training, and exercises; and serve as response coordinator for their local jurisdictions, except where a higher level LPHA coordinator has already been designated.

DHSS will add the following staff to the Office of Surveillance in the Division of Environmental Health and Communicable Disease Prevention (DEHCDP):
- Geographic Information Specialist (1) to integrate, analyze, and map data generated by the active and passive surveillance systems and display immediately in the emergency response GIS system.
- Research Analyst III (1) to conduct statistical analysis of data supplied through the reporting systems; evaluate trends and significance of data; and provide technical assistance for research.
- Health Program Representative II (1) to assist in the Hazardous Substances Emergency Events Surveillance system; document, follow, and assist in investigating such events.
- Clerk Typist II (1) to provide administrative support and data entry for the above staff members.

Objective 8: To apply information technology according to established specifications and in coordination with local public health agencies to enhance the reportable disease surveillance system, including electronic laboratory-based disease reporting.

With guidance from the Advisory Committee for Focus Area B, DHSS will:
- Work with laboratories to electronically abstract and transmit patient-identifiable test results for reportable diseases to DHSS and the LPHAs, to be integrated into the MOHSIS system. DHSS staff will also use these data to determine if an unusual number of tests are being performed.
- Work through the Missouri Hospital Association and the information technology staff of major hospitals to automate the HASS system by electronically abstracting specified symptoms/diseases of interest to public health and submitting these data to DHSS and the LPHAs.
- Develop electronic linkages among the SPHL, the ERDCS, and MOHSIS to assure that information is captured and linked efficiently during emergencies.
- Incorporate an epidemic detection algorithm into MOHSIS, the electronic HASS system, and electronic laboratory reporting so the data are monitored in real time, any aberrations are promptly detected, and responsible DHSS and LPHA staff are notified immediately.
- Improve GIS functionality, compatibility, and integration with NEDSS, MOHSIS, and ERDCS, and provide on-line accessibility in all district offices and the three major metropolitan LPHAs.

Timeline:

May-June 2002	Develop job descriptions and establish new DHSS positions
	Develop contracts with LPHAs, specifying deliverables and funding levels
June 2002	Develop Advisory Committee for Surveillance and Epidemiology
July – Aug. 2002	Interview and complete selection of personnel for positions
	Contract with LPHAs for 27 epidemiology specialist positions
July 2002 – Jan. 2003	Advisory Committee meets
August 31, 2002	Obligate all budgeted funds
Sept. – Oct. 2002	LPHAs hire epidemiology specialists
Sept. – Nov. 2002	Provide orientation and training for new DHSS and LPHA staff
Sept. – Dec. 2002	Develop plan for statewide surveillance evaluation process
Nov. 2002 – Jan. 2003	Establish and convene Regional Rapid Detection and Response Teams
Jan. – July 2003	Develop regional and statewide plans, including epidemiologic response plans
Jan. – Aug. 2003	Begin implementation of statewide surveillance evaluation process
June 2003	Conduct tabletop exercises of regional plans
July 2003	Conduct tabletop exercise of state plan
Aug. 2003	Conduct simulation exercises of state and regional plans

Measurable Milestones:

Progress will be evaluated using the following measures:
- Followup assessment of statewide coverage for 24/7 disease notification, to be conducted six months after the initial assessment.
- Implementation of statewide surveillance evaluation plan on schedule.
- Surveillance information technology enhancements developed and implemented on schedule.
- Success in recruiting, hiring, and training new state and LPHA staff on schedule.
- Followup needs assessment to determine improvements in education and training related to bioterrorism, surveillance and epidemiology, one year after initial needs assessment.
- Input from the Advisory Committee on Surveillance and Epidemiology members concerning the impact of workplan activities, and recommendations for improvements or new activities.

II. PUBLIC HEALTH EPIDEMIOLOGIC INVESTIGATION AND RESPONSE CAPACITIES

A. Critical Capacity: Rapidly and effectively investigate and respond to a potential terrorist event as evidenced by a comprehensive and exercised epidemiologic response plan that addresses surge capacity, delivery of mass prophylaxis and immunizations, and pre-event development of specific epidemiologic investigation and response needs.

Description of Existing Capacity:

State and Local Public Health Agency (LPHA) staff currently coordinate efforts to investigate and respond to disease outbreaks. The Section of Communicable Disease Control/Veterinary Public Health, (CDC/VPH) is primarily responsible for this coordination. As a condition for receiving Core Public Health Functions contract funds from DHSS, all 114 independent LPHAs participate in the passive and active surveillance systems, investigate disease cases according to DHSS guidelines, and coordinate outbreak investigation activities with DHSS.

DHSS provides an on-site training course in the Principles of Epidemiology, three times per year, for state and LPHA staff. Each LPHA has designated a professional staff member who has completed this course to serve as the primary contact person for disease surveillance, investigation and response.

A manual of guidelines and procedures for investigating disease cases and outbreaks has been published by DHSS and is available via the Internet. The DHSS Emergency Response Plan, as described in Focus Area A will be evaluated, updated and made available via the Internet.

DHSS works with many governmental and non-governmental partners to enhance the safety of the food supply. An Inter-Agency Food Safety Task Force was established in 1999 to coordinate DHSS activities with the Missouri Department of Agriculture (MDA), Department of Natural Resources (DNR) Public Drinking Water Program, Department of Economic Development (DED), Missouri and Lincoln University Extension Services, US Food and Drug Administration, US Department of Agriculture, LPHAs, and industry associations and representatives.

Assessment of Adequacy of Current Capacity:

Although Missouri is fortunate to have a statewide network of public health staff with at least minimal training in epidemiology, this coverage is very thin. In the major metropolitan statistical areas (MSAs), the ratio of disease cases per trained staff member is high. In the smaller cities and rural areas, most individuals assigned to these functions have other primary duties as nurses or environmental specialists.

Access to Principles of Epidemiology training is limited by funding and the capacity of the instructors, so there is consistently a waiting list for the course. While this course provides a basic grounding in infectious disease epidemiology, more advanced training has not been consistently available within the state and funding constraints have limited the number of staff who could attend CDC courses.

The public health system does not have ready access to consultants with specialized expertise in infectious diseases, infection control, or risk and vulnerability assessment who are currently practicing outside the governmental sector.

Although there is a good foundation for collaborative relationships between DHSS and LPHAs, and the system pulls together to manage disease outbreaks and mass screening/prophylaxis situations, there is no current, formal statement of the roles and responsibilities of the various levels of the system, no written

plan that addresses surveillance and epidemiology issues in detail, and no systematic process for after-action analysis to develop recommendations from disease outbreaks and other emergencies.

The need for systematic risk and vulnerability assessment of the food and water supplies is recognized by the responsible agencies, but no inter-agency planning has taken place, no standardized procedures have been adopted, and few resources have been dedicated to this effort.

Proposal for Effecting Improvements with Objectives:

Missouri will develop a statewide public health infrastructure with the capacity to coordinate and evaluate a comprehensive surveillance and response system for disease cases, clusters, outbreaks and potential terrorist events. A Regional Rapid Detection and Response Team (RRDRT) will be established in each of the nine planning regions and will include state and local public health staff as well as other medical, infection control, laboratory and hazardous materials experts. A comprehensive statewide response plan and nine regional plans will be developed and exercised, that will specifically address epidemiologic investigation and response needs, surge capacity, and mass prophylaxis and immunizations.

Objective 1: To assess current epidemiologic capacity and prepare a timeline for achieving the goal of providing at least one epidemiologist for each Metropolitan Statistical Area (MSA) with a population greater than 500,000 (Critical Benchmark #9).

As detailed under Critical Benchmark #9, DHSS will:
- Hire three doctoral-level Consultant Epidemiologists, to be stationed in the district offices in St. Louis, Independence (KC MSA), and Springfield.
- Hire six Epidemiology Specialists (master's level or equivalent experience), to be stationed in the district offices to assist and serve as back-up to the Consultant Epidemiologists.
- Establish contracts with LPHAs in each of the three largest MSAs to provide epidemiology specialists (master's level or equivalent experience) at a ratio of at least one per 350,000 population.

Objective 2: To ensure that a full-time response coordinator for bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies has been designated at the appropriate state and/or local levels.

- The Director of the Center for Emergency Response and Terrorism will serve as the state response coordinator.
- The Consultant Epidemiologists listed under Objective 1 above will serve as the Regional Surveillance and Response Coordinators for the major metropolitan areas and for two non-metropolitan planning regions each. They will coordinate development of the epidemiologic response component of the regional bioterrorism response plans and will coordinate the Regional Rapid Detection and Response Teams (see Critical Capacity I.A.).
- A total of 27 epidemiology specialists will be hired through contracts with LPHAs statewide and will serve as response coordinators for the local jurisdictions they serve, except in LPHAs where a higher level coordinator has already been designated.

Objective 3: To coordinate all epidemiologic response-specific planning in this section with the overall planning conducted in Focus Area A, and with hospital preparedness activities being facilitated by the Health Resources Service Administration, and all in conjunction with local public health agencies.

- The Regional Surveillance and Response Coordinators will serve on the Statewide Bioterrorism Preparedness Committee.

- The Regional Surveillance and Response Coordinators will also serve on the regional bioterrorism planning committees described in Focus Area A, which will integrate public health and hospital planning. They will be responsible for coordinating the development and implementation of Regional Rapid Detection and Response Teams in three regions each, including developing and exercising detailed epidemiologic response plans for each region, to be integrated into the regional bioterrorism response plans.
- Contracts will be established with institutions throughout the state (including universities, hospitals, laboratories, and others) to provide expertise in infectious diseases, infection control, and risk and hazard assessment for the Regional Rapid Detection and Response Teams. This will help to assure that epidemiologic planning occurs in the context of "real world" local conditions and hospital emergency response planning activities.

Objective 4: To train state and local public health staff who are designated to respond to a bioterrorism event, in their roles and in the specifics of the state's plan.

The following training will be provided by the Center for Emergency Response/Terrorism:
- Training for the RRDRT members on the public health system, the statewide and regional plans, and team roles and responsibilities.
- Training for the RRDRT members related to teams working in a crisis and how to make quick and appropriate decisions in a crisis.
- Regional and statewide tabletop exercises annually and one statewide simulated exercise annually. One will be a tabletop exercise and the second a simulation exercise. Each exercise will be evaluated and the results fed back to the RRDRTs for training purposes.
- Two National Pharmaceutical Stockpile (NPS) exercises annually, one in a rural location and the other in a metropolitan area. See Focus Area A for details. Each exercise will be evaluated and the results fed back to the RRDRTs for training purposes.

Objective 5: To ensure that risk and vulnerability assessments of food and water, including production, processing, and/or distribution facilities, are performed.

- A representative from the Missouri Department of Agriculture will be added to the Statewide Bioterrorism Advisory Committee to assure that risks related to the food supply are adequately addressed in the planning process.
- A representative from the Center for Emergency Response/Terrorism will join the Inter-Agency Food Safety Task Force and will work with the member agencies and organizations (see Capacity above) to assess the capacity needed to ensure a comprehensive statewide approach to risk and vulnerability assessments of food and water and develop a plan to address the needs. The Task Force will review existing assessment procedures and training approaches and select/adapt the best ones for Missouri. The plan will also address the training needs of the various key stakeholders: veterinarians, livestock producers, food processors, water utility operators, and public health, Missouri Department of Agriculture and Missouri Department of Natural Resources staff. To the extent possible, risk and vulnerability assessments will be integrated with ongoing food inspection activities conducted by DHSS and the LPHAs, and by the MDA Meat Processors Inspection Program.

Objective 6: To develop and train epidemiologic response teams to conduct field investigations, rapid needs assessments, exposure assessments, and response activities.

DHSS will:
- Establish a Regional Rapid Detection and Response Team (RRDRT) in each of the nine planning regions made up of state and local public health staff and other medical, infection control,

laboratory and hazardous materials experts, to provide well integrated epidemiologic response to urgent disease cases, outbreaks, potential bioterrorist incidents, and other public health emergencies.

- Hire three doctoral-level Consultant Epidemiologists [to be stationed in the DHSS district offices in St. Louis, Independence (KC area), and Springfield] to serve as the Regional Surveillance and Epidemiology Coordinators for three planning regions each; establish and coordinate the RRDRT in each planning region; and coordinate development and exercise of the epidemiologic investigation and response portions of the regional and statewide plans (Focus Area A).

- Hire six Epidemiology Specialists (master's level or equivalent experience), to be stationed in the DHSS district offices. They will assist the Consultant Epidemiologists in order to develop, exercise and maintain proficiency of the RRDRTs; assure that response occurs within defined timeframes and consistent with regional plans; coordinate among RRDRTs serving contiguous area; provide technical assistance and consultation to LPHA staff in the regions; and monitor the surveillance/epidemiology contracts with LPHAs (described below).

- Establish contracts with 19 LPHAs, to provide a total of 27 epidemiology specialists (master's level or equivalent experience) to cover all counties, to serve on the RRDRTs and participate in regional epidemiologic response planning, training, and exercises. In the metropolitan areas there will be at least one contract epidemiology specialist per 350,000 population.

- Establish contracts with institutions throughout the state (including universities, hospitals, laboratories, and others) to provide expertise in infectious diseases, infection control, and risk and hazard assessment for the RRDRTs.

- Provide training for the RRDRT members on the public health system, the statewide and regional plans, and team roles and responsibilities including how to make quick and appropriate decisions in a crisis (see Focus Area G for details).

Objective 7: To conduct bioterrorism sessions at key meetings and conferences of outside organizations involved in epidemiologic detection and response.

The Consultant Epidemiologists (see Objective 6 above) will be responsible for conducting bioterrorism sessions at state and regional meetings of the Missouri State Medical Association, Missouri Association of Osteopathic Physicians and Surgeons, Missouri Hospital Association, Association of Practitioners in Infection Control and Epidemiology, Missouri Nurses' Association, and specialty organizations (pediatrics, infectious diseases, emergency medicine, etc.).

Timeline:

May – June 2002	Develop job descriptions and establish new DHSS positions
	Develop contracts with LPHAs, specifying deliverables and funding levels
June 2002	Develop Advisory Committee for Surveillance and Epidemiology
June – Aug. 2002	Inter-Agency Food Safety Task Force assesses needs related to risk and vulnerability assessment of the food and water supplies
July – Aug. 2002	Interview and complete selection of personnel for positions
	Contract with LPHAs for 27 epidemiology specialist positions
July 2002 – Jan. 2003	Advisory Committee meets
July 2002 – April 2003	Statewide Bioterrorism Preparedness Committee meets quarterly
Aug. 2002 – Aug. 2003	DHSS, LPHAs, and other state agencies develop and implement statewide risk/vulnerability assessment plan for food and water supplies
August 31, 2002	Obligate all budgeted funds
Sep. – Oct. 2002	LPHAs hire epidemiology specialists

Sept. – Nov. 2002	Provide orientation and training for new DHSS and LPHA staff
Nov. 2002 – Jan. 2003	Establish and convene Regional Rapid Detection and Response Teams Contract with universities, hospitals, and other organizations for infectious disease and risk assessment expertise for RRDRTs
Jan. – July 2003	Develop regional and statewide plans, including epidemiologic response plans
June 2003	Conduct tabletop exercises of regional plans
July 2003	Conduct tabletop exercise of state plan
Aug. 2003	Conduct simulation exercises of state and regional plans

Measurable Milestones:

Progress will be evaluated using the following measures:

- Success in recruiting, hiring, and training new state and LPHA staff on schedule.
- Establishment of nine RRDRTs on schedule.
- Development of regional and statewide plans, with epidemiologic response component, on schedule.
- Followup needs assessment to determine improvements in education and training related to bioterrorism, surveillance and epidemiology, one year after initial needs assessment.
- Completion of statewide risk/vulnerability assessment plan for food and water supplies on schedule.
- Input from the Advisory Committee on Surveillance and Epidemiology members concerning the impact of workplan activities, and recommendations for improvements or new activities.

II. PUBLIC HEALTH EPIDEMIOLOGIC INVESTIGATION AND RESPONSE CAPACITIES

B. Critical Capacity: To rapidly and effectively investigate and respond to a potential terrorist event, as evidenced by ongoing effective state and local response to naturally occurring individual cases of urgent public health importance, outbreaks of disease, and emergency public health interventions such as emergency chemoprophylaxis or immunization activities.

Description of Existing Capacity:

State and Local Public Health Agency (LPHA) staff currently coordinate their efforts to investigate and respond to disease outbreaks. The Section of Communicable Disease Control/Veterinary Public Health, (CDC/VPH) is primarily responsible for this coordination. The Section has a staff of 21 statewide, nine of whom are located in district offices around the state.

As a condition for receiving Core Public Health Functions contract funds from DHSS, all 114 independent LPHAs participate in the passive and active surveillance systems, investigate disease cases according to DHSS guidelines, and coordinate outbreak investigation activities with DHSS.

DHSS provides an on-site training course in the Principles of Epidemiology, three times per year, for state and LPHA staff. Each LPHA has designated a professional staff member, who has completed this course, to serve as the primary contact person for disease surveillance, investigation and response.

Together, the state and local public health system has responded to an average of 68 disease outbreaks per year for the past five years (range 43-89). The depth of investigation and degree of response varies according to the disease or condition, local resources, and the timeliness of the initial notification. When indicated, mass prophylaxis with immune globulin has been conducted to control community-based outbreaks of hepatitis A.

The state and local public health system has provided a coordinated response to three incidents of tuberculosis exposures in public schools within the past two years, in different parts of the state. In each instance, mass screenings were necessary and were carried out smoothly with active community support.

DHSS received 1,095 anthrax-related calls during October-December, 2001, and provided technical assistance, consultation and laboratory testing to resolve them.

Between October and December 2001, DHSS mobilized for two emergency response events in the aftermath of September 11, 2001: a cutaneous ulcer with lymphandenitis initially thought to be B. anthracis (and rapidly ruled out) in the City of St. Louis, and B. anthracis contamination in a mail facility of Kansas City. Both of these events involved a response, and likely resulted in increased presentation of worried well to local hospitals.

The State Public Health Veterinarian, in the Section of CDC/VPH, is active in the Missouri State Veterinary Association (MVMA) and has developed collaborations with practicing veterinarians and veterinary laboratories to carry out surveillance for arboviruses, including West Nile Virus. He serves on the Exotic Species Council, an inter-agency group that monitors potential animal and human health risks associated with importation of exotic species into Missouri.

The Missouri Department of Agriculture (MDA), Division of Animal Health, mandates the reporting of certain animal diseases, including several potential bioterrorist agents. They provide consultation and training to veterinarians throughout the state on the recognition and reporting of animal diseases. Linkage to these activities takes place through the Inter-Agency Food Safety Task Force, established in 1999 to

coordinate DHSS activities with MDA, the Department of Natural Resources (DNR) Public Drinking Water Program, Department of Economic Development (DED), Missouri and Lincoln University Extension Services, US Food and Drug Administration, US Department of Agriculture, LPHAs, and industry associations and representatives.

Assessment of Adequacy of Current Capacity:

Although Missouri is fortunate to have a statewide network of public health staff with at least minimal training in epidemiology, this coverage is very thin. In the major metropolitan statistical areas (MSAs), the ratio of disease cases per trained staff member is high. In the smaller cities and rural areas, most individuals assigned to these functions have other, primary duties as nurses or environmental specialists.

Access to Principles of Epidemiology training is limited by funding and the capacity of the instructors, so there is consistently a waiting list for the course. While this course provides a basic grounding in infectious disease epidemiology, more advanced training has not been consistently available within the state and funding constraints have limited the number of staff who could attend CDC courses.

The public health system does not have ready access to consultants with specialized expertise in infectious diseases, infection control, or risk and vulnerability assessment, who are currently practicing outside the governmental sector.

Although there is a good foundation for collaborative relationships between DHSS and LPHAs, and the system pulls together to manage disease outbreaks and mass screening/prophylaxis situations, there is no current, formal statement of the roles and responsibilities of the various levels of the system, no written plan that addresses surveillance and epidemiology issues in detail, and no systematic process for after-action analysis to develop lessons and recommendations from disease outbreaks and other emergencies.

Proposal for Effecting Improvements with Objectives:

Missouri will develop a statewide public health infrastructure with the capacity to coordinate and evaluate a comprehensive surveillance and response system for disease cases, clusters, outbreaks and potential terrorist events. A Regional Rapid Detection and Response Team (RRDRT) will be established in each of the nine planning regions and will include state and local public health staff as well as other medical, infection control, laboratory and hazardous materials experts. A comprehensive statewide response plan and nine regional plans will be developed and exercised, that will specifically address epidemiologic investigation and response needs, surge capacity, and mass prophylaxis and immunizations.

Objective 1: To achieve an around-the-clock capacity for immediate response to reports of urgent cases, outbreaks, or other public health emergencies, including any events that suggest intentional release of a biologic agent.

DHSS will:
- Designate and publicize a toll-free hotline number for after-hours reporting of urgent disease cases and potential bioterrorist incidents, linked to the DHSS answering service and Duty Officer system.
- Conduct an assessment to determine existing capacity of all 114 LPHAs for 24/7 receipt of and response to disease reports and potential bioterrorist incidents.
- Using the results of the assessment and based on need, provide funding to LPHAs to acquire necessary communications equipment, including pagers, cell phones, and satellite phones, and assure that each LPHA has a duty officer on call 24/7 to receive urgent reports locally.

- Establish a Regional Rapid Detection and Response Team (RRDRT) in each of the nine planning regions made up of state and local public health staff and other medical, infection control, laboratory and hazardous materials experts.
- Hire three doctoral-level Consultant Epidemiologists and six master's level Epidemiology Specialists, stationed in the DHSS district offices in St. Louis, Independence (KC area), and Springfield, to coordinate the RRDRTs, and provide them with pagers and cell phones.
- Establish contracts with 19 LPHAs, including each of the three largest MSAs, to provide a total of 27 master's level epidemiology specialists to serve on the Regional Rapid Detection and Response Teams, and provide them with pagers and cell phones.
- Develop epidemiologic detection and response plans for each region and statewide, that include local plans and processes for activating LPHA personnel to respond to emergencies, including urgent disease reports and potential bioterrorist incidents.
- Provide training for the RRDRT members on the public health system, the statewide and regional plans, and team roles and responsibilities including how to make quick and appropriate decisions in a crisis (see Focus Area G for details).
- Establish contracts with universities, hospitals, laboratories and other institutions in each region to provide infectious disease, infection control, and risk assessment experts to participate in the RRDRTs and respond immediately to assist the public health agencies in any event that suggests intentional release of a biologic agent.

Objective 2: To assess the adequacy of state and local public health response to outbreaks of disease and other public health emergencies.

DHSS will:
- Develop bioterrorism detection and response plans for each region and statewide, that include local plans and processes for activating LPHA personnel to respond to emergencies, and evaluate them via two regional and two statewide exercises (one tabletop and the other a simulation).
- With guidance from the Advisory Committee for Surveillance and Epidemiology, the Office of Epidemiology will develop and implement a standard protocol for post-outbreak evaluation that includes objective evaluation measures and feedback from key state/local/private partners.
- Disseminate results of post-outbreak evaluations to all LPHAs and RRDRTs as well as all units within DHSS who are involved in outbreak detection and response.

Objective 3: To assess and strengthen links with animal surveillance systems and the animal health community.

- A representative from the MDA will be added to the Statewide Bioterrorism Preparedness Committee to assure that risks related to the animal population are adequately addressed in the planning process.
- The State Public Health Veterinarian will serve as the liaison with MVMA, MDA, and the regional Consultant Epidemiologists. They will collaborate to determine whether the animal disease reporting regulations need to be updated to include additional bioterrorist agents, and to assess the training needs of practicing veterinarians and develop appropriate training.

Objective 4: To ensure the competence of local and state staff assigned to respond to urgent cases, disease outbreaks, and public health emergencies by providing necessary supplies, equipment and training.

As described in more detail in Focus Area G, Capacity A, Objective 2, DHSS will:
- Train the new LPHA and DHSS staff and other RRDRT members in surveillance and epidemiology, data analysis methods and tools including Epi Info software, and bioterrorism specific content.

- Provide four additional Principles of Epidemiology courses in the next year, to increase the number of LPHA staff who can assist with Focus Area B functions in a public health emergency.
- Support key DHSS and LPHA staff and medical providers to attend advanced surveillance and epidemiology training provided by CDC and the St. Louis University School of Public Health.
- Coordinate with an academic institution to deliver training on decision making and team crisis management for the RRDRTs on a regional basis.

The contracts with LPHAs (see Objective 1 above) will include funding for a laptop computer, pager and cell phone for each new epidemiology specialist, as well as a $5,000 travel budget. The new DHSS field staff (see Objective 1) will be provided with computers, DHSS network access, standard office equipment, pagers, cell phones and access to laptop computers for field work.

Objective 5: To participate in CDC's Epidemic Information Exchange Program

The regional Consultant Epidemiologists and the State Epidemiologist will participate in the Epidemic Information Exchange Program and will promptly forward information received through this medium to appropriate local and DHSS staff. They will use the system to notify individuals in other states about potential disease exposures and outbreaks identified in Missouri.

Ti**meline:**

May-June 2002	Develop job descriptions and establish new DHSS positions Develop contracts with LPHAs, specifying deliverables and funding levels
June 2002	Develop Advisory Committee for Surveillance and Epidemiology
July – Aug. 2002	Interview and complete selection of personnel for positions Contract with LPHAs for 27 epidemiology specialist positions
July 2002 – Jan. 2003	Advisory Committee meets
July 2002 – April 2003	Statewide Bioterrorism Preparedness Committee meets quarterly
Aug. 2002 – Aug. 2003	DHSS, LPHAs, and other state agencies develop and implement statewide risk/vulnerability assessment plan for food and water supplies
August 31, 2002	Obligate all budgeted funds
Sept. – Oct. 2002	LPHAs hire epidemiology specialists
Sept. – Nov. 2002	Provide orientation and training for new DHSS and LPHA staff
Oct. – Nov. 2002	Advisory Committee develops a standard protocol for post-outbreak evaluation
Nov. 2002 – Jan. 2003	Establish and convene Regional Rapid Detection and Response Teams Contract with universities, hospitals, and other organizations for infectious disease and risk assessment expertise for RRDRTs Implement standard post-outbreak evaluation protocol
Jan. – July 2003	Develop regional and statewide plans, including epidemiologic response plans
June 2003	Conduct tabletop exercises of regional plans
July 2003	Conduct tabletop exercise of state plan
Aug. 2003	Conduct simulation exercises of state and regional plans

Measurable Milestones:

Progress will be evaluated using the following measures:
- Followup assessment of statewide coverage for notification and evaluation of urgent disease reports 24 hours/day, 7 days/week, to be conducted six months after the initial assessment.
- Success in recruiting, hiring, and training new state and LPHA staff on schedule.
- Establishment of nine RRDRTs on schedule.
- Development of regional and statewide plans, with epidemiologic response component, on schedule.
- Followup needs assessment to determine improvements in education and training related to bioterrorism, surveillance and epidemiology, one year after initial needs assessment.
- Completion of statewide assessment of training needs for animal health surveillance, on schedule.
- Input from the Advisory Committee on Surveillance and Epidemiology members concerning the impact of workplan activities, and recommendations for improvements or new activities.

Focus Area B: Surveillance and Epidemiology Capacity

CONTRACTUAL CATEGORY

Contracts for Epidemiology Staff for LPHAs

15 contracts with LPHAs to hire one Epi Specialist apiece

Epi Spec Salary	42,000		
Fringe @ 25%	10,500		
Travel	5,000		
Computer equipment (laptop)	4,000		
Communications eq.	300 (combined cell phone/text pager)		
Total "Direct"	61,800		
Administration (8%)	4,944		
Per Contract Total	66,744		1,001,160

4 contracts, each to hire three Epi Specialists and one clerk

Epi Specialist Salary	42,000	3	126,000
Clerk Salary	15,500		15,500
Fringe @ 25%	14,375		35,375
Travel	5,000	3	15,000
Computer equipment (laptop)	4,000	3	12,000
Communications eq.	300	3	900
Total "Direct"	81,175		204,775
Administration (8%)	6,494		16,382
Per contract total	87,669	221,157	884,628

TOTAL LPHA CONTRACTS　　　　**$1,885,788**

OTHER CONTRACTS
Contracts for infectious disease/BT expertise for Regional Rapid Detection and Response Teams

3 Metropolitan areas (KC, St. Louis, Spgfld)	10 each @$6,500	195,000
Regions H, B, E, I and G	5 each @ $25,000	125,000
Boone and Cole Counties (Region F)	5 each @ $10,000	50,000

TOTAL OUTSIDE CONTRACTS　　　　**$370,000**

PERSONAL SERVICES

Consultant Epidemiologists (3), Center for Emergency Respons/Terrorism
Three consultant epidemiologists will be hired by DHSS, and placed in the district offices
in Independence, St. Louis, and Springfield to coordinate all activities related to
Focus Area B, surveillance and epidemiology, throughout the state. Each will lead the development of
of three Regional Rapid Detection and Response Teams and the development of the surveillance and
epidemiology components of three regional plans. They will assure coordination among
the LPHA contract staff to achieve a seamless system to detect and respond to disease cases,
outbreaks and potential bioterrorism incidents.
        Salary   3 @ 65,028   195,084

Epidemiology Specialists (6), Section of Communicable Disease Control/Veterinary Public Health
These will be located in district offices throughout the state. They will assist and provide backup for
the Consultant Epidemiologists to carry out regional planning and coordination of activities related
to surveillance and epidemiology. They will provide technical assistance and consultation
to the LPHAs and serve on three RRDRTs each.
        Salary   6 @ 40,716   244,296

Geographic Information Specialist (1), Office of Surveillance
Integrate, analyze, map data generated by the High Alert Surveillance System, the Emergency
Response Data Collection System (ERDCS) and the Missouri Health Surveillance
Information System (MOHSIS), and display immediately in the bioterrorism module
of the Missouri Health Emergency Response Geographic Information Systems (MHERGIS).
        Salary   45,676

Research Analyst III (1), Office of Surveillance
Responsible for statistical and research analysis and manipulation on data supplied through reporting
systems; work with Consultant Epidemiologists and Epidemiology Specalists to evaluate trends and
significance of data; and assist, coordinate, and provide technical advice in research on bioterrorism,
other infectious disease outbreaks, and other public health threats and emergencies.
        Salary   40,716

Health Program Representative II, Office of Surveillance
Assist in the Hazardous Substances Emergency Events Surveillance (HSEES) system; document and
follow incidents involving biological, chemical, or other public health threats and emergencies; and
assist the Section of Environmental Public Health with investigations on incidents.
        Salary   30,210

Clerk Typist II, Office of Surveillance
Administrative support and data entry for the HPR, RA, GIS and Epi Specialists
Maintains databases, equipment inventory, develops training and meeting schedules, and
completes routine correspondence.
        Salary   15,354

TOTAL FOR PERSONAL SERVICES   **$571,336**

FRINGE BENEFITS   0.365   **$208,538**

TRAVEL
Standard rate for State of Missouri is $5,000 per FTE for instate and out-of-state travel
          12 professional FTE @ 5,000   **$60,000**

EQUIPMENT
Equipment to increase GIS functionality, compatability, and integration with NEDSS, MOHSIS, ERDCS, and on-line accessibility for emergency responders listed in Attachment 1

                                                          265,283

Enhancement of three DHSS district offices and six large LPHAs to access and utilize GIS through a web-based portal.
          ArcGIS 8.1 @ $1,272   11,448
          StreetMap @ $424   3,816
          ESRI ArcGIS training and expenses @ $2800   25,200
                                                          40,464

Office computer information systems (13 FTE @ $1,065 each)   13,845

Office furnishings (std. amt. per FTE = $1,480)   19,240

Portable computers for epidemiology specialists and consultant epidemiologists (9 @ $4,000)   36,000

Combination cellular telephone/text pager (9 @ $50 ea. + $20/mo.)   2,610
          (for each consultant epi and epi specialist)

TOTAL EQUIPMENT   **$377,442**

SUPPLIES
          Batteries for portable equipment, portable printer paper,
          Tyvek disposable suits, printer cartridge replacements,
          power cords, etc.   **$31,615**

OTHER
          Computer network connection costs (13 FTE @ $2,300 ea.)   **$29,900**
          Hospital Active Surveillance System   **569,004**
          Expand Emergency Response Data Collection System (ERDCS)   **63,000**
          Implement epidemic detection algorithm   **84,000**

INDIRECT COSTS   **$292,453**

TOTAL, FOCUS AREA B   **$4,543,075**

Page 98 - Add Focus Area B Budget Information (4 of 6 pages).
Financial Information Forms submitted to CDC (hard copy only).

Page 99 - Add Focus Area B Budget Information (5 of 6 pages).
Financial Information Forms submitted to CDC (hard copy only).

Page 100 - Add Focus Area B Attachment (6 of 6 pages).
Financial Information Forms submitted to CDC (hard copy only).

FOCUS AREA C: LABORATORY CAPACITY – BIOLOGICAL AGENTS

I. LABORATORY SERVICES

A. Critical Capacity: To develop and implement a jurisdiction-wide program to improve rapid and effective laboratory services in support of the response to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies. (Critical Benchmark #10, see attached)

Description of Existing Capacity:

The Laboratory Response Network: This past year the Missouri State Public Health Laboratory (SPHL) received funding from CDC to increase preparedness for bioterrorism events through implementation of the Laboratory Response Network (LRN)(Critical Benchmark #10). A half-time Project Specialist was hired in September 2000 to identify Level A laboratories; enhance communication with clinical laboratories and pilot training sessions utilizing video conferencing equipment purchased through the HAN grant. A master contact list of all Level A laboratories has been prepared which includes the laboratory name, address, contact person, telephone number, fax number, e-mail address (if applicable) and a self-evaluation of capacity to perform rule-out testing for anthrax. Two email groups were established for those laboratories with email capability, one composed of those with the capacity to perform rule-out anthrax testing and one without that testing capacity. These two email groups have been confirmed through broadcast messages.

Education and Training: The SPHL has placed information on the DHSS web site dealing with Category A bioterrorism threat agents in both Microsoft Word and pdf format. This information includes specimen collection and transport, test procedures performed by the SPHL, reference culture submission, environmental testing (if applicable), turn around time for laboratory results and contact names and telephone numbers. It also prominently displays a revision date to enable users to easily see if they have the latest information available. The site also provides a generic email service, which is checked daily, for questions of a less urgent nature, as well as links to other useful sites such as the Department of Health and Senior Services (DHSS) homepage, CDC, USAMRIID, etc. The web site address has been provided to all laboratories on the master list by e-mail or letter mail.

The first pilot training session utilizing video conferencing technology has been provided to Level A laboratories with 34 attendees representing 18 facilities. It was presented in collaboration with St. Louis City and St. Louis County health departments. The SPHL staff provided information about the LRN, the specimen submission process and technical information on Category A agents. The local public health agencies provided local response information including speakers from emergency management and the FBI. Two more training sessions are planned for presentation in other areas of the state by the end of June 2002.

Response Planning: The SPHL has developed an emergency response plan for dealing with bioterrorism threats and has participated in the development of an integrated DHSS Emergency Response Plan that in turn integrates with the statewide plan. DHSS has had a Memorandum of Understanding (MOU) in place with the Federal Bureau of Investigation since 1998 and the SPHL has performed testing for both the Eastern and Western District FBI offices since before that time. The MOU defines roles and responsibilities for both the FBI and DHSS. Additionally it establishes a submission process for samples to the SPHL. This submission process was used as the basis for the process outlined in DHSS Health Alert 10 that was issued during the anthrax event in fall of 2001.

Operational Relationships: SPHL personnel have provided collection information to HazMat teams, provided bacteriological bench training to the US Army 7th Weapons of Mass Destruction, Civil Support Team stationed at Fort Leonard Wood army base, spoken at WMD events presented by the FBI,

participated in bench-top exercises and will present at an upcoming conference for local public health agencies dedicated to bioterrorism preparedness.

Assessment of Adequacy of Current Capacity:

The SPHL has just begun to reach out and establish coordinated working relationships with the private laboratory community. Previously, relationships have been test- and service-related between testing units and specific private laboratory personnel. It is necessary for the SPHL to establish an ongoing dedicated program that addresses planning, communication and training with the total laboratory community.

Laboratory Response Network: The previously funded one-half time staff member is not adequate to meet the critical capacity of establishing and maintaining the LRN, including the identification of additional clinical laboratories, environmental laboratories, communication and reporting channels, needs/capacity assessments and training.

Education and Training: The SPHL lacks a State Laboratory Training Coordinator to provide ongoing education and training to laboratory personnel, as well as other partners such as local public health agencies (LPHAs), HazMat, first responders and law enforcement personnel.

Response Planning and Operational Relationships: There is no existing staffing capacity adequate to carry out this critical component. This is presently carried out by the half-time Project Specialist. It is necessary to have dedicated, full-time personnel to coordinate planning, readiness assessment and maintain operational relationships with all partners. No response plan has been developed addressing surge/redundancy capacity, chemical events, electronic reporting and sharing of laboratory results, etc.

Implementation/Improvement Plan and Objectives:

Objective 1: To establish and maintain the Laboratory Response Network throughout the state of Missouri to ensure readiness, collaboration and preparation for bioterrorism, other outbreaks of infectious diseases and other public health threats and emergencies.
- SPHL will hire a Laboratory Program Advisor (LPA) who will provide support to the SPHL Director to ensure the organization, management and accomplishment of program objectives. The duties will include but are not restricted to:
    - Communication and coordination among the SPHL, Level A clinical laboratories and environmental laboratories within the state.
    - Oversight and coordination for all of the objectives listed under Critical Capacity A, including planning, assessment, evaluation, communication and coordination functions as well as many of those listed under Critical Capacity B.
    - Serve as the lead in developing a SPHL emergency response/bioterrorism plan.
    - Serve as the SPHL contact with the DHSS Center for Emergency Response/Terrorism.
    - Serve as the SPHL representative on emergency response planning committees at the local, regional, state and national levels.
    - Attend national meetings/trainings on emergency response.
- SPHL will hire a Senior Office Support Assistant to provide clerical support for the Laboratory Program Advisor and State Laboratory Training Coordinator (Objective 2).

Objective 2: To provide training and education to laboratory and medical personnel and other identified partners such as local health, law enforcement, HazMat, and first responder personnel to ensure readiness and preparation for bioterrorism, other outbreaks of infectious diseases and other public health threats and emergencies.

- The SPHL will hire a Laboratory Training Coordinator, under the direct supervision of the LPA and whose responsibilities will include but are not be limited to the following.
  - Maintain the contact list for Level A laboratories, and coordinate with Missouri Hospital Association (MHA) on a quarterly basis to be sure lists coincide.
  - Conduct need/testing capacity assessments of Level A clinical laboratories and environmental laboratories, collaborate with MHA to be part of HRSA hospital needs assessment for hospital laboratories.
  - Working with the Laboratory Information Technologist (See Capacity B, Objective 6), conduct an assessment of the information technology capabilities of the Level A laboratories.
  - Conduct training needs assessments within the SPHL system.
  - Maintain the bioterrorism information on the SPHL web page.
  - Identify possible training partners such as universities, health systems, local public health agencies, etc.
  - Design and present training courses for laboratory personnel, emergency response personnel, local health personnel, etc.
  - Coordinate training activities with the National Laboratory Training Network.

Objective 3: To develop an integrated response plan that will direct how the SPHL and laboratories within the state will respond to bioterrorism events, other outbreaks of infectious diseases and other public health threats and emergencies.

- SPHL Director will establish an Advisory Committee composed of representatives of identified partners to advise the SPHL on issues relating to integrated response and support for public health threats. This committee will meet twice a year, at a minimum, and the LPA will serve as Executive Secretary to this body.
- LPA will prepare a written plan for responding to bioterorrism events and other infectious disease outbreaks, and other public health threats and emergencies. This process will include but not be restricted to the following activities.
  - Coordinate planning with DHSS Center for Emergency Response/Terrorism and Regional Response Planning Managers (see Focus Area A).
  - Identify national, cross-state, interagency, interdepartmental partners.
  - Identify regional/local partners such as Regional Response Planner (see Focus Area A), Regional Rapid Detection and Response Teams (RRDRT, see Focus Area B), local public health agencies, first responders, hospital laboratories, etc.
  - Identify roles and responsibilities for these partners in the SPHL plan.
  - Identify the role and responsibility of SPHL in partner response plans.
  - Identify data management needs within SPHL, DHSS and with emergency response partners.
  - Perform gap analysis of the SPHL plan and current capacity, develop plans and timelines to address identified gaps.

Objective 4: To establish and/or expand operational relationships with responders to public health emergencies including local public health agencies, HazMat teams, law enforcement, primary care providers and others.

- The SPHL will utilize the information gained from the needs/testing capacity and information technology capabilities assessments. The LPA will meet with the local public health agencies and Regional Response Planning Managers, Regional Response Planners and RRDRT members to

identify laboratory testing needs and result-reporting demands, including electronic reporting and sharing of laboratory results.

- The LPA will collaborate with proposed Regional Response Planning Managers, Regional Response Planners, members of the RRDRT and local health agencies to develop a plan for meeting identified local laboratory needs.
- The LPA and Training Coordinator will meet with proposed Regional Response Planning Managers, Regional Response Planners, members of RRDRT and other key local responder partners to determine training needs and develop a training plan.
- The LPA and Training Coordinator will meet with State and Federal partners to determine training needs and develop a plan to meet identified needs.

Objective 5: Develop a chemical response plan including specimen handling, packaging and referral following CDC guidelines.

- The SPHL will develop collection, specimen handling and packaging protocols following CDC guidelines.
- The SPHL will create a Memorandum of Understanding with a CDC-approved referral laboratory to perform chemical testing on specimens from Missouri including transport, turn around time and reporting as agreed upon with the reference laboratory.
- The SPHL will explore collaboration with identified partners such as Department of Natural Resources laboratory, 7th Weapons of Mass Destruction Civilian Support Team, etc.

Timeline:

May 2002 – June 2002:	Develop job descriptions and establish positions
May 2002 – June 2002:	Obligate dollars for three new positions
July 2002 – Aug. 2002:	Interview and complete selection of personnel for positions
	Establish SPHL Advisory Committee
Aug. 2002 – Oct. 2002:	Develop protocol and MOU with a CDC approved laboratory for testing specimens during a possible chemical event
Sept. 2002 – Oct. 2002:	Provide orientation and training for new personnel
Nov. 2002 – Jan. 2003:	Complete identification of Level A laboratories
	Identify Environmental Laboratories
	Verify two-way communication channel with private laboratories
	Design a testing capacity/training needs assessment for Level A laboratories and environmental laboratories
	Design an assessment of information technology capabilities for Level A laboratories
	Conduct a needs assessment for training within the SPHL
	Following the chemical response plan, design training for specimen collection and specimen transport
	Begin development of SPHL integrated emergency response plan
	Collaborate with Laboratory Information Technologist and Office of Information Systems to identify data management needs
Jan. 2003:	Update SPHL Advisory Committee on progress toward completing objectives of Bioterrorism plan
Feb. 2003 – April 2003:	Conduct assessments of local laboratories for testing capacity/training needs and information technology capacity, evaluate results and prioritize needs

Identify potential training partners such as universities, National Laboratory Training Network (NLTN), etc. and determine possible collaborative training projects

Meet with Regional Response Planners, RRDRT and local responders to assess training needs, develop a training plan

Meet with Federal and State responders to determine training needs and develop a plan to meet identified needs

Export information on specimen collection for chemical testing to Level A laboratories, local public health agencies, etc.

Prepare a training plan for SPHL staff

Continue development of integrated response plan

May 2003 –Aug 2003:   Meet with local Regional Response Planners, RRDRT and local public health agencies to evaluate their local laboratory assessment results versus identified laboratory needs for response. Identify gaps and develop correction plans

Submit SPHL response plan, gap analysis and correction plans to the SPHL Advisory Committee

Begin developing training sessions for either Level A laboratories, local responders or federal/state responders and SPHL staff based on prioritized needs assessments and training plans

Measurable Milestones:

Evaluation of progress will include the following:
- Capacity of the SPHL has been increased by the addition of Laboratory Program Advisor, State Laboratory Training Coordinator and Senior Office Support Assistant.
- Funding has been obligated on schedule.
- Laboratory Advisory Committee has been appointed and convened.
- Laboratory Response Network has been established with appropriate two-way communication channels.
- Needs assessments have been conducted, evaluated and prioritized.
- SPHL chemical response plan has been developed and distributed.
- Internal training plan for SPHL staff has been completed and prioritized.
- Plans addressing unmet local response laboratory needs have been completed.
- SPHL training plan for both Level A laboratories and first responders completed.
- SPHL integrated response plan completed and submitted to SPHL Advisory Committee for comments/approval.

FOCUS AREA C: LABORATORY CAPACITY – BIOLOGICAL AGENTS

I. LABORATORY SERVICES

B. Critical Capacity: As a member of the Laboratory Response Network (LRN), to ensure adequate and secure laboratory facilities, reagents, and equipment to rapidly detect and correctly identify biological agents likely to be used in a bioterrorism incident.

Description of Existing Capacity:

The SPHL maintains standard protocols for specimen transport that conform to postal regulations. Scientists are trained in handling of all specimens following standard protocols. A courier system is in place for transporting specimens from 68 sites throughout the state. Safety manuals, both general and work site specific, are available in each work area and are updated and reviewed at least on an annual basis by all personnel. Appropriate documentation of review, incident reports and immunization of staff is maintained.

Proper biosafety levels are assured for each Category A bacteriological agent. Protocols are in place for specimens for botulism toxin to be referred to CDC for testing. Once a rapid assay is available for botulinum toxin the SPHL will be able to process specimens for all bioterrorism threat bacteriological agents. The SPHL is a BSL 2 facility utilizing BSL 3 practices. There is a dedicated two-room isolation suite that meets BSL 3 requirements which is reserved for bioterrorism events only. The suite has limited access with a special lock, a Biological Safety Cabinet Class II (BSCII) that is vented to the outside, etc. Dedicated supplies and equipment, such as an incubator and refrigerator, are located in the suite. Category A and B viruses that require a Biosafety level 4 such as smallpox and Viral Hemmoragic Fevers (VHFs) cannot be processed at the SPHL at the present time. The SPHL can perform testing for BSL 2/3 viral agents, including: viral isolation, serology procedures and many other testing procedures that would rule out BSL 4 viral agents such as Varicella Zoster in the case of suspected smallpox.

The SPHL maintains sufficient reagents and equipment to respond to disease outbreaks and limited bioterrorism events, participates in CLIA approved proficiency testing programs, and CDC sponsored programs such as testing for *Bacillus anthracis*. Test methods, such as PFGE, are established and validated by CDC. Quality control and assurance regimes are stringently adhered to and appropriately documented. A stock culture bank is maintained in a locked –70 degree freezer with appropriate inventory control. A triage procedure for specimen submission was developed during the anthrax event of 2001 in collaboration with DHSS program personnel and the FBI (DHSS Health Alert 10) and includes screening for explosives, chemicals and radiological hazards prior to submission. This basic procedure can be adapted if challenged by new agents or events.

At present only the unit managers of microbiology and virology are fully proficient in all aspects of bioterrorism lab response, including isolation, identification and molecular methods, clinical and environmental specimen collection, transport and processing, safety and referral procedures. In the microbiology unit two staff members are in the process of becoming proficient with real-time polymerase chain reaction (RT-PCR) procedures and one staff member is approximately 90% trained in all aspects other then rapid technologies for bioterrorism agent identification. In the virology unit one staff member is being rapidly trained in bioterrorism response/testing procedures including RT-PCR and is establishing testing procedures for Varicella Zoster. The SPHL has purchased a LightCycler, sent one staff member to CDC for training in the new and rapid methods, and is in the process of test validation with CDC for RT-PCR. Three staff members are fully trained in PFGE to support epidemiological investigations and the SPHL is a contributing member of PulseNet. Laboratory security meets CDC/NIH guidelines with controlled access through the use of ID badges, an onsite guard at the entrance, controlled code access to

laboratory testing areas, appropriate decontamination and disposal of materials, appropriate shipping protocols, and safety manuals.

The SPHL data management system is a stand-alone system based on Access databases dedicated to individual testing areas. All SPHL PCs have a secure connection to the Internet through a T1 fiber optic line that is protected behind a firewall. Laboratory reporting is by paper copy or fax to the submitter and the appropriate DHSS program. At present the data management system is not integrated within the laboratory or with the department-wide data management system. Electronic reporting of laboratory results either by the SPHL or private laboratories to DHSS surveillance systems or local public health agencies is not available at the present time.

Assessment of Adequacy of Current Capacity:

The SPHL is understaffed in both the microbiology and virology units. This makes it difficult to conduct the necessary cross training needed to meet increased testing demands during a bioterrorism event or major infectious disease outbreak. To reach staffing levels deemed necessary to allow cross-training of senior staff and institute new molecular testing procedures, the SPHL needs to increase its public health laboratory scientific staff by 5 positions, 2 in virology and 3 in microbiology, and continue a previously funded scientist position. Unit managers and State Laboratory Training Coordinator (See Critical Capacity A) need to provide internal training and identify and utilize external training resources for senior technical staff. New testing procedures, such as time-resolved fluorescence (TRF) and RT-PCR, must be instituted and/or validated by CDC. Rapid testing procedures for pathogens in food and milk need to be instituted at the SPHL. Planning needs to occur for water testing for bioterrorism agents.

The SPHL management team, which includes unit managers, Director and Assistant Director, Laboratory Program Advisory and State Training Coordinator (See Critical Capacity A), must review response protocols to bioterrorism events, identify gaps and rewrite protocols to address identified gaps, such as surge capacity, redundancy testing, sample accession and onsite triage. Specimen transport issues need to be addressed to provide more comprehensive coverage of the state. The system needs to be tested through participation in simulation exercises with DHSS partners.

Data management, integration and electronic reporting are some of the major weakness in the SPHL ability to respond to bioterrorism, infectious disease outbreaks and other public health emergencies. The SPHL needs a Laboratory Information Technologist with a public health laboratory background to develop an electronic management system to meet internal laboratory integration needs, transporting of results into the DHSS system and external reporting of laboratory results to submitters and other identified responder partners. The data management plan must be completed by early 2003.

Implementation/Improvement Plan and Objectives:

Objective 1: To develop all inclusive plans and protocols that will allow the SPHL to respond to bioterrorism events, disease outbreaks or other public health emergencies.

- The department will establish a contract to expand the statewide courier system from 68 to 218 pickup sites to provide more comprehensive coverage of the state. This will include all local public health agencies and hospitals in Missouri. Pick up will be five days a week with emergency on-demand pickup for weekends.
- DHSS will establish rapid detection procedures for microbial and parasitic pathogens and microbial toxins in food, water and dairy products to screen a large number of samples and produce a result with a high degree of sensitivity and specificity within 24 hours. The department will plan for coordinated response between the Environmental Bacteriology and Microbiology Units and any

identified outside partners such as the Department of Agriculture or Department of Natural Resources laboratories.

- The SPHL will establish a protocol review committee to review existing bioterrorism protocols and perform a gap analysis. This standing committee will be chaired by the LPA and will be composed of laboratory managers from both the technical and support units.
- The SPHL will prepare plans to address identified gaps. The Laboratory Advisory Committee, focusing on integration issues, will review plans. Plans will include but not be restricted to:
  - A surge response onsite capacity and/or plan using as a benchmark the ability to handle 1,500 specimens over a three-day period for possible bioterrorism threat agents.
  - Staffing issues related to short and long term surge response.
  - A sample accession procedure for possible bioterrorism specimens that addresses special safety factors, chain of custody, sample triage for testing and sample storage/return process.
  - Utilization of the TB branch laboratory for bioterrorism testing to address both offsite surge capacity and redundancy testing issues.
- The SPHL will develop a plan to meet identified training needs for SPHL staff, both technical training and possible cross-training with response partners.

<u>Objective 2:</u> To develop and maintain testing capacity for LRN-validated procedures of the following bioterrorism threat agents: *Bacillus anthracis, Yersinia pestis, Franceisella tularensis, Clostridium botulinum* toxin and other level B and C protocols as they become available.

- DHSS will hire five Public Health Laboratory Scientists, two in the virology unit and three in the microbiology unit, to expand capacity for performing LRN-validated procedures.
- DHSS will promote two senior staff members, one in virology and one in microbiology, to Senior Scientist positions to assume existing bioterrorism testing duties from Unit Managers.
- SPHL will provide training for new staff and cross training for senior staff in LRN-validated testing procedures.
- SPHL will provide training for senior staff in new level B and C protocols as they are released.
- SPHL will research testing procedures for Haunta virus, Q fever and arboviruses. The SPHL will prepare plan for instituting these test procedures in year 2.

<u>Objective 3:</u> Increase testing capacity at the SPHL to include both real-time polymerase chain reaction (RT-PCR) and time-resolved fluorescence (TRF) rapid assays.

- The SPHL will purchase equipment needed to expand testing capabilities for rapid assays.
- The SPHL will purchase equipment needed to enhance existing capacity to perform RT-PCR procedures.
- The SPHL will provide training/cross-training for senior staff.
- The SPHL will develop a plan for expanding use of molecular procedures to address outbreaks of infectious diseases and other public health emergencies.

<u>Objective 4:</u> Design and conduct one simulation exercise to test laboratory readiness to detect and identify one BT threat agent on the Category A list.

- The SPHL will participate in the following exercises to test emergency response plans. After-activity assessments and reports will be made to the SPHL Director, SPHL staff, Laboratory Advisory Committee and DHSS Center for Emergency Response/Terrorism.
  - Department of Health and Senior Services Table top exercise
  - Regionally planned Table top exercises
  - SEMA statewide simulated exercise

- The Training Coordinator will assess the availability of proficiency testing material for Level A laboratories using simulated and non-select agent materials. A design and implementation mechanism will be addressed in the second year.

Objective 5: Enhance the security and effectiveness of the Bioterrorism Isolation Suite and sample accession area to meet the special needs during a bioterrorism event.

- The SPHL will purchase, install and certify a new Class II biological safety cabinet (BSC) with a fully opening, hinged sash.
- The SPHL will purchase and install video cameras in the accession area and the isolation suite to record specimen handing/testing to meet security and legal requirements.
- The SPHL will purchase a laptop computer that can be taken to specifically designated/designed sample receiving areas for sample accession during a bioterrorism event.

Objective 6: Create an integrated, electronic laboratory data management system that will meet the needs of DHSS, local health agencies, emergency response partners, and the LRN.

- The SPHL will hire a full-time Laboratory Information Technologist.
- The SPHL will upgrade computers within the SPHL system.
- Laboratory Information Technologist will conduct an assessment of present SPHL data management capacity and needs.
- Laboratory Information Technologist will conduct a needs assessment of partners for SPHL data.
- Laboratory Information Technologist will investigate available data management systems for public health laboratories, such as the LITS system available from CDC, including cost, installation time and procedures and compatibility with the existing DHSS data management system.
- The SPHL will coordinate with DHSS, Office of Information Systems (OIS) to develop an interim system that will allow for specified result data to pass into the DHSS central data registry.
- Laboratory Information Technologist will prepare a recommendation on a data management system for the Laboratory Director including budget and timeline for complete installation and interface with MOHSIS.
- Laboratory Information Technologist will oversee the installation of the new data management system including purchase of hardware/software, system design, training, interface with DHSS, and system maintenance/upgrades.

Timeline:

April 2002 – May 2002:	Develop job descriptions and establish any new positions
	Upgrade PHLS to Senior PHLS
	Order new equipment
May 2002 – June 2002:	OIS establish contract for interim patch to transfer specified data
	Obligate dollars for 6 new positions
	Expand contract for courier system
	Interview and select person to fill LIT position
	Complete validation process for RT-PCR
June 2002 – July 2002:	Interview and complete selection of personnel for technical positions
	Begin training process for new employees
	LIT begin assessment of data management system/needs for SPHL
Aug 2002 – Oct 2002:	Continue assessment of data management needs and systems available
	Begin validation new testing procedures such as TRF and rapid assays of food products as new equipment is delivered

Nov 2002 – Jan 2003:	Establish internal committee and review SPHL internal response plan, identify gaps
	Identify training needs for SPHL staff, develop a plan addressing needs
	Install and certify new BSC (delivery dependent) in BT suite
Feb 2003 – March 2003:	LIT submit plan addressing electronic data management needs
	Probationary period for new staff completed
	Complete interim patch for specified data transfer
April 2003:	Complete identification of needs for second year funding
May 2003 – Aug 2003:	Complete establishment of new testing procedures
	Complete new protocols and internal response plans. Submit to Laboratory Advisory Committee for comment
	Conduct exercises, complete after-activity reports
	Conduct availability survey for proficiency samples to test readiness of Level A laboratories

Measurable Milestones:

Evaluation of progress will include the following:

- Capacity of SPHL has been increased by the addition of five new technical staff and a Laboratory Information Technologist.
- Rapid testing capacity of SPHL has been increased by the addition of rapid detection process for food in addition to validation of RT-PCR and establishment of TRF.
- BT isolation suite and equipment have been upgraded.
- SPHL bioterrorism response plan has been evaluated, upgraded and submitted to Advisory Committee and DHSS.
- Plan has been completed recommending laboratory information system to be installed and first steps taken. Interim patch is in place and operating.
- Exercises have been conducted, after-activity reports completed.

Focus Area C: Laboratory Capacity – Biological Agents
Budget

Critical Capacity A

Laboratory Program Advisor - Broadband II	$ 57,996
To ensure organization, management and accomplishment	
of program objectives	
State Laboratory Training Coordinator – Broadband 1	$ 51,252
To assess, coordinate, plan and conduct	
Training for Level A laboratories and other partners	
Senior Office Support Assistant	$ 23,184
To provide clerical support for the	
Laboratory Program Advisor and the	
State Laboratory Training Coordinator	
Project Specialist .5 FTE @$27.55/hr	$ 27,522
(Fringe does not apply since this individual is retired)	
This position previously funded and will continue	
training and development of LRN to meet '02 objectives.	
Will write job description for and train/orient new personnel.	
Travel	$ 12,500
Office Supplies	$ 5,000
Office set ups for 3.5 new positions (3.5 X $4,380)	$ 15,330
Network charges (3.5 X $2,300)	$ 8,050
Color printer	$ 5,000
Scanner	$ 1,000
Lap Top Computer (2)	$ 8,000
Digital Camera (1)	$ 1,500
Multi Media Projector	$ 4,000
System Furniture for Clerical position	$ 4,500

Total   **$224,834**

Focus Area C: Laboratory Capacity – Biological Agents
Budget

Critical Capacity B

Public Health Lab Scientists (6)
      3- Microbiology 3-Virology ($30,780.00 X 6) $ 184,680
To increase testing capacity and free senior
staff to develop new procedures.

Salary increase for PHLS to Senior Scientist (3) ($7,975 each) $ 23,925
Senior positions to develop new procedures

Laboratory Information Technologist $ 51,252
To conduct a system review and needs assessment
of SPHL data management. Institute plan of action.
Oversee installation and support new system

Network charges (7 X $2,300)	$	16,100
Office set ups for 7 new positions (7 X $4,380)	$	30,660
Office Supplies	$	5,000

Technical Equipment:
The equipment will be used to update existing equipment and
purchase new equipment. This will allow SPHL to expand capacity
for existing procedures and incorporate new testing procedures
for bioterrorism agents.

-70 Freezer	$	11,000
-20 Freezer	$	1,500
Incubators (2)	$	4,000
Inverted Microscope	$	3,000
Refrigerators (3) 1-Virology 2-Micro	$	1,300
Light Cycler (Roche)	$	57,657
Refrigerated Centrifuge	$	6,000
Victor2 System	$	47,943
Automatic pipettors	$	3,000
Large Reach-in Incubators (3) @ 4904.00	$	14,732
Roche MagNA Pure LC	$	85,300
Light microscopes (2)	$	15,420
FA microscope	$	15,718

6' Class II Biological Safety Cabinet with fully-opening hinged sash	$	6,500
Base cabinet/accessories/electrical outlet	$	2,000
Installation/ renovations in BT isolation suite	$	30,000

Dupont Qualicon BAX System $ 35,000
For rapid detection of pathogens in food and water

Reagents for 500 tests @$8.50/test	$	4,750
Reagents/supplies for rapid EIA test for enterotoxins in food - 500 tests @$8.00/specimen	$	4,500
Video camera (2) Sanyo DSRC100 1.5 Mega Pixel color camera W/built in Hard Disk Storage to film accession/testing of BT samples for security/legal purposes	$	4,698
Travel	$	35,000
Contract with OIS for interim patch To transfer SPHL test results into MOHSIS	$	63,000
Contract with Springfield/Greene County Health Department to purchase a biological safety cabinet	$	10,000
Color Printer (2)	$	10,000
Scanner (2)	$	4,000
Lap Top Computer(2)	$	8,000
Personal Computers to upgrade lab-wide system (100)	$	100,242
Software/Hardware to begin installation of a laboratory information management system	$	100,000
Upgrade of courier system Expand from 68 to 218 pick up sites plus On demand Saturday and Sunday service	$	525,000
Emergency stockpile of supplies and reagents To handle surge of 1500 samples/3 days	$	75,000

Total Focus Area C; Critical Capacity B   **$1,595,877**

Total Focus Area C; Critical Capacity A   **$ 224,834**

Fringe and Indirect   **$ 368,122**

TOTAL FOCUS AREA C $2,188,833

Page 114 - Add Focus Area C Budget Information (4 of 5 pages).
Financial Information Forms submitted to CDC (hard copy only).

Page 115 - Add Focus Area C Budget Information (5 of 5 pages).
Financial Information Forms submitted to CDC (hard copy only).

FOCUS AREA E: HEALTH ALERT NETWORK/COMMUNICATIONS AND INFORMATION TECHNOLOGY

A. Critical Capacity: To ensure effective communications connectivity among local public health agencies, healthcare organizations, law enforcement organizations, public officials, and others as evidenced by: a) continuous, high speed connectivity to the Internet; b) routine use of e-mail for notification of alerts and other critical communication; and c) a directory of public health participants (including primary clinical personnel), their roles, and contact information covering all jurisdictions.

Description of Existing Capacity:

Population covered by Health Alert Network: The Missouri Department of Health and Senior Services (DHSS) has met Critical Benchmark #11 (see Critical Benchmarks Section). Currently, the Health Alert Network (HAN) covers all but two local public health agencies or 97 percent of Missouri's population. During 2002 DHSS will strongly encourage the remaining two agencies to participate in the HAN.

The DHSS has connected over 2,000 PCs in the DHSS central office and remote sites throughout the state via high-speed leased lines to create a seamless department-wide network. The network uses Compaq Proliant servers with Novell Netware and WindowsNT, IBM RS6000 servers and an IBM SP frame using AIX to support the network. Client workstations, primarily IBM and Compaq PCs, connect to the network servers using 100 megabit Ethernet lines. Standardized network software includes GroupWise, Microsoft Word, Excel, Access, Microsoft Project and PowerPoint. The RS6000 and SP servers are used for statistical analysis, Internet/Intranet web servers, firewalls, the MOHSAIC database, and the data warehouse. The SP frame has a capacity of eight nodes that can run as serial or parallel processing nodes.

All of the 114 Local Public Health Agencies (LPHAs) are connected to DHSS through high-speed lines. The DHSS WAN uses Proteon and IBM routers, Racal CSU/DSU's, and Bay network hubs to connect external sites. DHSS has multiple T1 backbone lines to the St. Louis, Kansas City and Springfield metropolitan areas. The rural sites are connected to the backbones via Frame Relay lines varying in speeds from 56KB to 384KB. Some remote sites access the network through dialup lines to Bay Networks Remote Access Server modem pools that are connected to Compaq Proliant servers running Citrix MetaFrame software with Radius authentication. The WAN also links most of the federally qualified health centers and a number of Missouri's rural health clinics to DHSS and other participants. At present the network is not available during routinely scheduled backup and network maintenance procedures.

Over the past two years DHSS has been building a technology infrastructure to improve the state's ability to respond to a bioterrorism attack. During this time DHSS has increased its bandwidth and secured communications between DHSS and the LPHAs. Services that have been added to DHSS and the county and city health departments to respond to a bioterrorism attack or other health emergency included: secure e-mail between county and major city health offices and DHSS, video conferencing between DHSS and the three Metropolitan Statistical Areas (MSAs), automated Fax capabilities for the counties and major cities and Web-based video training. Two way video communications is via TCP/IP using the DHSS WAN.

The State's public health e-mail is done over these private lines and does not interface with the public Internet e-mail making it secure. All but two LPHAs are using secure e-mail capability. LPHAs access the World Wide Web via the existing DHSS network infrastructure. The State of Missouri has a high-speed, continuous link to the Internet that serves all state agencies that is secured by firewall and network segmentation. The LPHAs use their existing dedicated lines for direct Internet access 24 hours a day, 7 days a week.

24/7 Flow of Critical Health Information: Missouri used the HAN base funds to provide broadcast Fax and e-mail capabilities from and to the state and LPHAs (Critical Benchmark #12, see Critical Benchmarks

Section). The metropolitan areas and many of the remaining LPHAs maintain a directory of key responders for their jurisdiction. The directories include Fax numbers and e-mail addresses for a variety of responders. After September 11, 2001 each LPHA used the directories to broadcast alerts to the health care providers, emergency responders, law enforcement and other key organizations in their jurisdictions. The department shared critical information at the state level with appropriate state agencies including the Department of Public Safety, the Missouri Hospital Association, the State Emergency Management Agency (SEMA) and others to assist in disseminating the alerts. For some areas face-to-face contact at the local level was the best means for communicating critical information to law enforcement and others.

Directory of Public Health and Clinical Personnel: Missouri has initiated directories of key public health and emergency responders. Directories were created for the three metropolitan statistical areas (MSAs) to support broadcast Fax activities. Initially, these directories contained entries for 9,405 key responders. Funds from the HAN base cooperative agreement were allocated to the lead agency for each of these three sites to purchase and install this technology and initiate the directories. These three sites continue to exercise and update their directories. Hardware and software was also acquired using these initial funds to create directories located at DHSS for each LPHA. These rural LPHAs were responsible for creating and maintaining directory information for key responders for their jurisdiction. The directories were used to communicate alerts via broadcast Fax or e-mail. Attempts were made to standardize categories of personnel so topic specific information could be sent to appropriate clinicians or professions. While some agencies have initiated electronic directories as a part of HAN, many have not.

Assessment of Adequacy of Current Capacity:

Population covered by Health Alert Network: Missouri's current capacity for this Critical Benchmark meets the required capacity. It is adequate for e-mail and Fax capabilities but needs to be expanded to provide redundant methods of notification via cell phones, pagers and other means. The technology for this expanded capacity will be addressed under Critical Capacity B of this Focus Area. Missouri's video communications system, while adequate, is impacted by the amount of traffic over the WAN, resulting in stops and starts of images and sounds. Technology for improvement is addressed under Focus Area G.

24/7 Flow of Critical Health Information: Missouri has been successful in communicating using the existing capacity of the HAN but this capacity does not adequately meet the need for 24/7 communications. DHSS already has a 24/7 duty officer system with after-hours answering service, access to key surveillance and disease control staff via pagers and cell phones, and established policies and procedures for responding to after-hours reports. Many of the LPHAs have implemented similar procedures for notification of public health issues in their jurisdictions. Communication of alerts and other critical information is completed via a variety of means. At present the 24/7 duty officer system and the HAN capacity have not been fully integrated. The HAN currently requires the receiver of the information to be physically present at the place where a Fax is received or at their computer at work to access e-mail. Often this is during routine work hours only and does not provide 24/7, out-of-the-office notifications that a communication has been received.

Directory of Public Health and Clinical Personnel: Missouri successfully exercised the directories created through HAN to electronically distribute information after September 11, 2001. In reviewing the process, a number of weaknesses were identified in their use. Not all LPHAs have created directories for their jurisdictions. Directories were not consistent in content and format across jurisdictions. Electronic linkages to state associations, other departments, SEMA and hospitals through the Missouri Hospital Association were not created resulting in hurried efforts to determine the best means to share information with these vital partners. The directories were not integrated with MOHSAIC, which contains a database of health care providers. The MSA directories were maintained at the lead agency location only. Had their

system been incapacitated, a redundant file was not available to the state or critical partners to transmit communications.

Proposal for Effecting Improvements with Objectives:

Population covered by Health Alert Network: Missouri will work to increase to 100 percent of the population being covered by HAN. DHSS and a representative of the Director's Advisory Council, which is comprised of LPHA administrators, will contact the two remaining agencies to strongly encourage their participation in the HAN. With their agreement, DHSS staff will work quickly to establish connections. Funds will also be used to sustain the current level of connectivity and support at the central office and LPHA level during the period of August 31, 2002 through August 30, 2003, since current base funding will be expended.

DHSS will assure Missouri continues to meet Critical Benchmark #11 through the following activities:

Objective 1: To increase to 100% the LPHAs connected through the HAN to continuous, high speed Internet and secure e-mail for notifications and other critical communication.

- Missouri will contact the two local public health agencies that currently do not participate in HAN to explain how HAN functions, learn why they do not participate and work with them to resolve any issues or concerns. If requested by the agency, an LPHA administrator will contact them to discuss HAN.
- Missouri will implement secure HAN connectivity through high speed Internet and provide e-mail capabilities for remaining agencies.

Objective 2: To maintain continuous, high speed Internet and e-mail connectivity to the HAN for 100% of the LPHAs.

- Missouri will renew the Bioterrorism base funded contracts with the three MSAs.
- Missouri will maintain current Bioterrorism base funded technical staff to support Help Desk and LPHA broadcast Faxing and e-mail capabilities.
- Missouri will continue to provide LPHAs 24/7 secure direct access to the Internet and e-mail.
- Under Focus Area G Missouri proposes to enhance the ability to utilize video communications by off loading video traffic from the Department's IP network. DHSS anticipates an improvement in the quality of video communication and an expansion in the number of simultaneous multi-point conferences possible.

Objective 3: To enhance the quality and number of sites in Missouri with video communications capacity.

Missouri will complete the following to improve video communications:
- DHSS OIS staff will implement and support an ISDN connection to provide a secure method of communication using the public switched telephone network.

24/7 Flow of Critical Health Information: Missouri proposes to integrate the HAN system with the current 24/7 duty officer system. Once an alert or message is received, the duty officer will use the HAN system as a tool to rapidly receive and disperse communications among public health partners at the local, regional, state and federal levels. This interface will include the ability to rapidly notify appropriate levels of staff and support the activation of the Departmental Situation Room (DSR). When the Director of DHSS activates the DSR, high-level representatives of the appropriate DHSS program areas (surveillance,

epidemiology, local agency coordination, public information, information technology, etc.) gather in a single room to coordinate all DHSS responses to the emergency.

In Missouri, the HAN supports e-mail and continuous Internet access through the DHSS office for almost all of the LPHAs. Acquisition of sufficient technical staff and software and placing them in the DHSS central office will provide capacity for 24/7 system support to respond to communication or network issues at the local, regional and state levels. If additional years of funding are received, an assessment will be completed to determine if technical staff support is needed at the regional levels.

Objective 4: To develop a communications system that supports 24/7 flow of critical health information among hospital emergency departments, state and local health officials, law enforcement officials and other key responders.

Missouri proposes the following activities to accomplish this objective:
- DHSS Duty Officer will use the HAN to communicate, assign and track follow-up activities and receive electronic reports of diseases from health care providers and laboratories.
- Missouri will acquire the technical staff, hardware and software to create 24/7 availability of the HAN. Technical staff will be available around the clock to provide communications and network support.
- Missouri will form a work group that includes representation from the state and LPHAs, SEMA, the Department of Public Safety, DHSS and other appropriate partners to develop a statewide plan on how communications will flow to critical partners on a 24/7 basis.
- Work group will present the plan with implementation proposal and costs to the Bioterrorism Preparedness Committee for approval.
- Missouri will implement the infrastructure and test the system at the local, regional and central office levels to determine if communications flow adequately among critical partners.
- Missouri will identify any weaknesses or gaps in the communications flow and implement a plan to address these weaknesses or gaps.
- Missouri will test HAN communications on a scheduled basis.

Objective 5: To create an enhanced web site to support Bioterrorism and other health emergency communications to the general public, health care providers and others.

Missouri proposes the following to accomplish this objective.
- Missouri will establish an enhanced web site in collaboration with Focus Areas F & G. The web site will be developed to support risk communication and health information dissemination to at least three targeted groups, the general public, health care professionals and secure recipients. Information will include: the most recent alerts, protocols for screening and treatment related to diseases or conditions of interest to public health. The secured area will be used to post restricted information that can only be accessed by authorized users. The standards identified in Appendix 6, IT Functions #8 and 9 will be complied with.

Directory of Public Health and Clinical Personnel: Missouri plans to use Lightweight Directory Access Protocol (LDAP v.3.0) for single sign-on (or a common entry that synchronizes the various IDs and passwords). We have done considerable research in determining how to use LDAP for authentication and authorization in addition to its use as a public health directory. DHSS is investigating IBM's Tivioli Identity Directory, Novell's Netware NDS, and Microsoft's Active Directory as potentials for the LDAP directory.

<u>Objective 6:</u> To expand and roll up the current broadcast Fax directories to create a statewide shareable directory of Public Health and Clinical Personnel which is consistent with IT Function #7.

Missouri proposes the following activities to accomplish this objective:
- Missouri will use funds allocated under the National Electronic Disease Surveillance System (NEDSS) to obtain a contractor to design the METADirectory (using LDAP).
- Missouri will use funds from this cooperative agreement to purchase the software and hardware needed to complete the directory.
- Missouri will develop critical policies and procedures on the maintenance and exercise of the directories.
- Missouri will hire additional staff to synchronize and administer the disparate directories and to incorporate GIS capabilities to map health care resources.
- Missouri will work with the LPHAs to roll up their current broadcast Fax and e-mail directories into the LDAP directory. The shareable directories will contain the names, addresses, telephone numbers, Fax numbers, e-mail addresses and specialty or professional area of expertise of public health workers, private health care providers and other critical responders for each jurisdiction.
- Missouri will use the directories to support notifications during regional and statewide exercises.

Timeline:

May 2002:	Contact two LPHAs not connected to HAN, resolve any issues and connect to HAN
May 2002 –July 2002:	Integrate Duty Officer procedures with HAN procedures
May 2002 – Aug. 2002:	Acquire OIS and contract staff for 24/7 coverage & enhancement plan
May 2002 – Aug. 2002:	Develop enhanced plan for electronic 24/7 communications including integration of DHSS Duty Officer procedures.
May 2002 – Oct. 2002:	Acquire and install Web server, create secure access
Aug. 2002 – Sep. 2002:	Present 24/7 plan to the State Bioterrorism Advisory Committee for acceptance.
Aug. 2002 – Sept. 2002:	Renew MSA contracts to sustain bioterrorism-related activities
Aug. 31, 2002–Aug. 30, 2003:	Sustain base-funded HAN capacity and support staff
Aug. 2002 – Dec. 2002:	Acquire and install needed technology.
Aug. 2002 – Jan. 2003:	Collaborate with Focus Area G to enhance video communications
Oct. 2002 – Dec. 2002:	Create public health personnel directory template
Nov. 2002 – Jan. 2003:	Train staff responsible for creating and maintaining directories
Dec. 2002 – June 2003:	Complete implementation at the state, regional and local levels
May 2003:	Initiate testing of the system to determine communications flow.
June 2003 – Aug. 2003:	Exercise communications systems as part of Regional and Statewide simulation exercises – correct deficiencies
Aug. 2003:	Initiate ongoing assessment and address weaknesses/gaps in communication flows

Measurable Milestones:

- Timely, effective, and complete cross-jurisdictional Internet communication for transmission of alerts, routine communications and data.
- 24/7 availability of network support staff
- Web site with posting of health alerts and other public health communications
- Directory of public health personnel and other key responders

FOCUS AREA E: HEALTH ALERT NETWORK/COMMUNICATIONS AND INFORMATION TECHNOLOGY

B. Critical Capacity: To ensure a method of emergency communication for participants in public health emergency response that is fully redundant with e-mail.

Description of Existing Capacity:

Redundant Emergency Communications Method: Missouri has very diverse topography. While a wide variety of communication devices are functional in our state, not every device functions at an acceptable level statewide. Implementation of the HAN network described under Capacity A provides broadcast Fax and e-mail capacity to reach all but two LPHAs. The use of Fax directories and e-mail address groups by the state and the local public health agencies has expanded the means by which agencies can share urgent communications with public health partners. These methods were exercised during the high alert period following the events of 09/11/01. The current system lacks the technology to send redundant messages to cell phones, voice mailboxes or pagers.

At the state level, DHSS staff has worked with a number of agencies including SEMA to disseminate alerts and messages to their emergency response partners. This has been accomplished using a variety of means such as re-transmitting messages using their existing communications systems, sharing of directories, or broadcast Faxing to their recipients. However, some of these agencies received alerts from federal or national sources as well. The majority of these were faxed, resulting in various groups receiving multiple copies of the same information. This proved problematic for some groups as the receipt of redundant Fax communications clogged their systems. Also problematic were the alerts not routed through the DHSS. Often these communications did not correspond to the numbering system established by the state and lacked Missouri-related content. Missouri has not expanded its capacity to electronically link directly to the emergency communications systems of statewide emergency response partners.

Timeliness and Completeness of Redundant Method of Alerting: The HAN system is routinely exercised through its use to distribute a weekly update of issues of interest to the local public health infrastructure. During the period Missouri was on high alert, the distribution of alerts to other emergency communication systems was accomplished either electronically or using manual sharing. While limited, the system proved effective in communicating with many of Missouri's public health partners. Previously the MSAs have assessed the timeliness, currency and completeness of entries in their directories. The lead agencies periodically send messages with a request of a response from recipients. Both the state and MSAs research the cause of undeliverable messages and update the directories at all levels.

Assessment of Adequacy of Current Capacity:

Redundant Emergency Communications Method: The current capacity to broadcast Fax and e-mail is adequate during normal work hours but does not provide 24/7 communication. A number of issues were identified with the current system during a de-briefing conference call with the lead MSA agencies. These issues include: a) broadcast Fax and E-mail messages are generally sent to work addresses; b) the volume of a single broadcast Fax has degraded or totally overloaded the Fax systems of numerous receivers resulting in the delayed distribution of critical information; and c) recipients were not notified during non work hours or when absent from their normal work setting.

Currently receipt of these messages is dependent on the staff being in their offices or their ability to check e-mail from remote locations. They are not actively alerted that a message has arrived. Additional technology is required to expand Missouri's current capacity to send alerts and/or notifications to redundant devices such as cell phones, voice mailboxes and pagers. Key to these redundant message devices is the

ability to know that the messages have been received and responded to no matter the location of the receiver or the time of day.

The DSR is equipped with surplus equipment and is limited to the number of computers and printers currently in the room. Although adequate for e-mail and Internet access, the computers are not powerful enough for GIS or other complex analysis tools.

Timeliness and Completeness of Redundant Method of Alerting: The system connecting the LPHAs is adequate for the sending of broadcast Fax and e-mail. However it is not interfaced with the DHSS 24/7 Duty Officer system. It is not adequate for 24/7 notification via pagers, cell phones and/or voice mailboxes. The system must be expanded to provide redundant methods of notification. The enhanced software must provide a means to evaluate the receipt of messages via all communication methods.

Current distribution of alerts to other emergency communication systems, while effective, is not efficient. The system has limited capacity for electronically linking to emergency communication systems of local and statewide emergency response partners. Additional analysis is needed to determine the best means to expand the capacity for electronically linking to emergency communication systems of local, regional and statewide emergency response partners. Key to this linkage is the use of standards identified in Attachment 6 IT Functions.

Evaluation of the timeliness of message receipt and the number of undeliverable messages must be ongoing. At present, the lead agencies for each of the MSAs have taken responsibility for collecting this information and working to reduce the number of undeliverable messages for their jurisdictions. The routine sending of broadcast Faxes and e-mails by DHSS also provides the opportunity to routinely evaluate the number of messages received or undelivered. Expanding the messaging capacity to include redundant methods will increase the number of addresses and numbers that must be kept current. Missouri currently lacks adequate capacity to expand the methods of notification and to exercise and evaluate these enhanced communications means on a routine basis.

Technology was set up in a temporary location to establish a departmental situation room. The room is not adequately wired to support permanent connections to the statewide system. Computer equipment, conference phones, video communication monitors, satellite technology and additional data lines are needed to create a permanent site for centralized 24/7operations capabilities.

Proposal for Effecting Improvements with Objectives:

Redundant Emergency Communications Method: Missouri proposes to expand the emergency communications methods for participants in public health emergency response to ensure a fully redundant communication method with broadcast Fax and e-mail.

Objective 1: To create redundant methods of emergency communication for key partners in public health emergency response that provides 24/7 notifications statewide.

Missouri will accomplish this objective through the following activities.
- Missouri will solicit proposals for purchase and implementation of an Interactive Voice Response System (IVRS) to use as an Emergency Notification System (ENS) at the local, regional and state levels. DHSS will acquire an ENS system capable of allowing multiple authorized people the ability to respond to an emergency event. Once an event has been triggered the ENS would supplement the existing bioterrorism infrastructure by providing the following: send voice messages over land and wireless phone systems to groups of people selected and defined by the county/city health departments, and the nine regional planning groups; receive positive feedback

from the person called via the interactive voice response capabilities; send e-mails about the event to groups of people selected and defined by the bioterrorism scenario development workgroup; send faxes to groups of people selected and defined by the workgroup; and send numeric and text messages to pagers and wireless connected personal digital assistants.

- Missouri will link the ENS with the public health personnel directory, to send alerts and/or communications to appropriate levels of recipients.
- Missouri will post communications and alerts on the Health Alert/Emergency Web site designed under Focus Area F and post secured communications to authenticated users when required.
- Missouri will install additional T1 Point Of Telephone Service (POTS) phones lines to enhance communication capacities for the ENS.
- Missouri will provide training to technical staff and authorized users on how to create and initiate scenarios.
- Missouri will structure the ENS system into scenarios that are specific to different emergencies or events with call groups that can be attached to a scenario. Individual name and calling data can be added to a specific scenario. The system will use the directory created under Capacity A. The database information transfer and sharing will be supported by a standard message format based on the LDAP Data Interchange Format (LDIF). Data fields in the directory will use X.500 standards for field type and length.
- Missouri will work to assure that scenarios are initiated or controlled by authorized individuals only. The ENS software will include the capability of securing access to and limiting scenario revisions and/or initialization to authorized individuals. This will be accomplished through multiple levels of security. Based on a users access, they may be authorized to perform one of the following: create and edit both scenario and contact groups, create and edit only contact groups, trigger a notification event but not edit scenarios, or, start or stop a notification event.
- Once the software purchasing process has been initiated, Missouri will establish a work group including representation from key partners to develop the scenarios to be included. The scenarios must have the capacity to support the response plans developed at the state and regional levels.
- The workgroup will develop a proposal for electronic linkages to state and regional partners. They will make recommendations for linking to the emergency communication systems at the state and regional levels. DHSS staff will research the proposed linkages and determine if the systems are compatible and the best technical solutions for completing the linkages. DHSS staff will collaborate with the Department of Public Safety and other partners to determine if electronic linkages can be established with state law enforcement agencies. These linkages will be completed where possible.
- This work group will develop a plan for continuity of operations should a catastrophic event occur.
- Both plans will be presented to the State Health Alert and Bioterrorism Advisory Committee for recommendations and approval. Missouri will implement the approved plans.
- Missouri will design a permanent Departmental Situation Room (DSR) to be used by staff 24/7 should an event occur. It will be equipped with sufficient computers to support up to ten multiple users and will include printers, Faxing, video and satellite communications including satellite phones. The DSR will be equipped with wireless network access so that additional computers and printers can be easily added if needed. Receipt and dissemination of all communications and bioterrorism alerts will be coordinated through the DSR.

<u>Timeliness and Completeness of Redundant Method of Alerting:</u> Once operational, staff at each level in the state that have been trained on the ENS system will create scenarios. These scenarios will be based on the Scenario workgroup recommendations and structured in accordance with CDC's categories of responders. Missouri will use the ENS to support communication of health alerts at the state, regional and local levels. Policies and procedures will be developed in conjunction with and support of other statewide bioterrorism plans. Scenarios will be developed and the redundant cell phones and pager numbers will be added to the

current public health workforce and partners directory information. OIS staff will participate in planning for and executing exercises at the state and regional levels.

Objective 2: To assess the timeliness and completeness of the ENS system to reach participants in public health response.

Missouri will accomplish this objective through the following activities.
- Missouri will use the ENS system to support rapid communication of situational information. The system will track statistics on the number of responders contacted, the successful methods of communication, the time messages were received and the number of undeliverable messages.
- Missouri will assign resources to maintain and support the ENS system.
- Resources responsible for support of the ENS system will research any undeliverable messages to determine the reason and erroneous or outdated information will be updated.
- After each exercise of the statewide and/or regional plans, the work group will meet to evaluate how efficiently and effectively the ENS system supported the exercise. Weaknesses in the scenarios will be identified and changes made to address these weaknesses.
- Missouri will develop a plan to provide for technological redundancy of the communication systems. Included will be a means to initiate alerts for multiple jurisdictions from remote sites should a catastrophic or other event cause the failure of a portion of the system.

Timeline:

May 2002 – Sept. 2002:	Purchase and install the Emergency Notification System (ENS) software application.
May 2002 – Sept. 2002:	Acquire additional POTS lines to support ENS communications
July 2002 – Sept. 2002:	Form workgroup to participate in sessions to develop potential ENS scenarios.
Aug. 2002 – Sept. 2002:	Complete wiring of DSR, purchase and install needed hardware and equipment.
Sept. 2002 – Oct. 2002:	Train technical staff on the ENS software
Sept. 2002 – Nov. 2002:	Complete plan for scenarios and present for approval to the Health Alert and Bioterrorism Advisory Committee.
Dec. 2002- Jan. 2003:	Train individuals to create and maintain scenarios using the ENS application.
Jan. 2003 – Mar. 2003:	Create initial scenarios in ENS.
Jan. 2003 – June 2003:	Complete electronic linkages to law enforcement and other emergency response systems.
July 2003 – Aug. 2003:	Evaluate the effectiveness of the scenarios to function as part of each regional and the state plan.
Sept. 2003:	Determine gaps or problems with scenarios.
Oct. 2003:	Complete initial scenario revisions.

Measurable Milestones:

- Operational, exercised second method of receipt of critical messages
- Fully equipped operational DSR
- Technological and staffing redundancy of critical information and communications systems plan

FOCUS AREA E: HEALTH ALERT NETWORK/COMMUNICATIONS AND INFORMATION TECHNOLOGY

C. Critical Capacity: To ensure the ongoing protection of critical data and information systems and capabilities for continuity of operations.

Description of Existing Capacity:

Policies and Procedures for Protection of Data and Information Systems: The DHSS Office of Information Systems (OIS) has developed and implemented policies and procedures for protecting and granting access to the DHSS integrated statewide network and applications. These policies address standards for system and network maintenance, data and system backups, off site storage, network and applications access, and use of the Internet and other system resources.

The greatest information security risk is not hackers but careless use by authorized users, such as sharing their password with others, writing their password down then leaving it where others can find it, using easy-to-guess passwords, and leaving their desk while their computer is logged on to a confidential database. To combat carelessness by users, DHSS has implemented policies that require users to keep their passwords confidential, to select a password that includes both numbers and letters, to change their passwords at least every 45 days, and to activate screensavers with passwords to protect the data when they are away from their desks. All DHSS contracts and Memorandums of Agreement address issues of confidentiality and security of protected data and the users have to agree to follow DHSS' security policies each time they log onto the network. DHSS has developed a computer based training (CBT) course on security that all users will be required to take. The minimum penalty for an infraction to the policies is to revoke the user's access privileges. At a maximum, penalties could result in loss of employment and/or legal prosecution.

For accountability purposes, the Missouri Health Strategic Architectures and Information Cooperative (MOHSAIC) applications create audit trails of user access and the content of data elements are archived and not deleted so a historical view of the data is created.

The network architecture includes a demilitarized zone (DMZ) for all Internet Web-based applications. All Internet users of DHSS applications must first go through a firewall before they can access the application's web server in the DMZ, and then data entered into the application must go back through the firewall to exit the DMZ before it can update data on the DHSS internal network.

All incoming e-mail is scanned for viruses before being sent to the recipient. In addition to scanning incoming mail for viruses, DHSS also stops mail with high-risk attachments, such as attached "EXE" files for review prior to sending over the network. In addition, DHSS has Symantec Virus Protection software loaded on all servers and client workstations to protect them from viruses that slipped through the e-mail scan or that might be in files downloaded from the Internet. To date DHSS has successfully detected and managed numerous viruses; none have interrupted the availability of the system.

OIS has established a unit of 3.5 full-time employees whose function is to receive requests for, validate user role and level of access requested, and process and manage IDs and Passwords for network and application access. DHSS currently uses a paper-based system for authorizing role-based access to the statewide network and applications. Often those requesting access must complete multiple access forms depending on the type of access needed. This manual process is frequently bogged down due to the number of access forms to be processed and the length of time required to complete them.

By signing the access request form, the user agrees to abide by the department's confidentiality and security policies stated on the form. The person's supervisor must counter sign the form to confirm that the

level of access requested is appropriate. Each time the user signs on to the network or an application this same policy statement is presented on the screen and the user is notified that by proceeding they are agreeing to abide by the policy.

DHSS performs daily and weekly backups of all critical information systems, and has procedures in place to securely store backup media off-site in a fireproof safe. While DHSS does not have the capacity for full system redundancy, it does have Uninterruptible Power Supply (UPS) units in our central office to allow for limited continuation of services in the event of a power outage.

Independent Validation and Verification of IT Security: At the present time, DHSS has not completed an independent validation and verification of the DHSS Internet security. Assessments of the DHSS network vulnerability, security and continuity of operations practices have not been completed. DHSS staff participates in state Information Technology committee meetings that discuss methods for making systems secure. Based on these discussions and research of current technology practices, OIS has implemented software that records accesses attempted by unauthorized users. If activity is detected, it is investigated and documented. State policies require notification of the Chief Information Officer (CIO) for the state of such events.

Assessment of Adequacy of Current Capacity:

Policies and Procedures for Protection of Data and Information Systems: While DHSS has implemented numerous policies and procedures, DHSS must continue to review, revise and enhance these policies as improvements in technology occur. OIS implemented role-based access with their integrated public health information system, MOHSAIC, in 1998.   As the system expanded and more types of public health information was added, the number of users has increased dramatically. The number of forms to be manually processed has increased beyond current resource capacity. The integration of multiple public health activities has created complexity in determining what access roles are needed to perform specific job requirements. The manual processing of access request forms is not adequate. Users complain of the length of time needed to get new user IDs and passwords. If they have experienced staff turnover, often a newly hired person will have sole responsibility for entering data into the system. Delays in obtaining a user ID and password create backlogs of work at the system user level. Automation of this process and synchronization of passwords and IDs will reduce the time needed to obtain access to the network. This is critical as we expand the number of users needing to report or access surveillance and other critical information.

Independent Validation and Verification of IT Security: DHSS has identified the need to have an external evaluation of the network security. Due to lack of sufficient funds, this evaluation has not been performed. While staff has successfully created a network that has repelled attacks at this time, an external assessment should be completed.

Proposal for Effecting Improvements with Objectives:

Policies and Procedures for Protection of Data and Information Systems: Technology will be incorporated to help assure that access to sensitive or critical information and information systems is not lost, destroyed, misappropriated or corrupted.   DHSS technical staff will follow standards identified under IT Function #9 to address security and critical infrastructure protection.

Objective 1: To ensure the ongoing protection of critical data and information systems.

Missouri will complete the following activities to accomplish this objective.

- Missouri proposes to increase the number and configuration of firewalls. Internet users would still have to initially pass through a firewall to get to the DHSS DMZ. However, instead of the web servers being in the DMZ, only the central authentication server will be located in the DMZ. After the user has been authenticated, he/she must then pass through another firewall to reach a web server, e-mail server or other applications on the DHSS internal network. The firewalls will run different software from two different vendors to make it even more difficult to gain unauthorized entry.
- Missouri will hire and train a firewall administrator to administer the firewalls, intrusion detection system, and to integrate the continuum of risk management tools to assure the security of critical systems.
- Missouri proposes to develop a web-based, paperless security access system utilizing electronic workflow, which will increase the speed, accuracy and security. Included in this system will be the synchronization of passwords.
- Missouri proposes to install additional UPS for critical servers in remote offices.
- Missouri proposes to purchase and install a generator at the central office location that is capable of supplying power to the computer room if the central office loses power for an extended period of time.
- Missouri proposes a comprehensive Risk Management solution to secure access and manage security policies across applications, and to centrally manage attacks, threats and exposures by correlating security information from firewalls, intrusion detectors, vulnerability scanning tools, e-mail scanning software and other security checkpoints.

Independent Validation and Verification of IT Security: Missouri proposes to use funds from this cooperative agreement to complete an external verification of security and continuity processes. Funds are also requested to complete an annual evaluation.

Objective 2: To regularly complete an independent assessment of the network vulnerability.

Missouri will accomplish this objective through the following activities.
- Missouri proposes to use the state system to procure the services of an external contractor to complete a review of and provide verification of security and continuity processes of critical information systems including HAN.
- Missouri will use the results of this outside review to identify and make needed changes to address any weaknesses identified.
- Missouri proposes to contract for an annual external review to assure the system remains secure.

Timeline:

June 2002 –Feb. 2003:	Develop an electronic access request process
June 2002 – Sept. 2002:	Contract for vulnerability assessment
July 2002 – Sept. 2002:	Hire firewall administrator
Aug 2002 – Oct. 2002:	Purchase and install new UPS
Sept. 2002 – Nov. 2002:	Train firewall administrator
Sept. 2002 – Oct. 2002:	Review assessment, develop improvement plan
Dec. 2002 – Feb. 2003:	Reconfigure DMZ
Feb. 2003 – April 2003:	Purchase and install power generator
Feb. 2003 – June 2003:	Purchase and install risk management software
Mar. 2003 – June 2003:	Purchase and install authentication server
June 2003 – Aug. 2003:	Develop risk management reports

Measurable Milestones:

- Independent validation and verification of IT security
- Data and Information Systems Policies and Procedures published

FOCUS AREA E: HEALTH ALERT NETWORK/COMMUNICATIONS AND INFORMATION TECHNOLOGY

D. Critical Capacity: To ensure secure electronic exchange of clinical, laboratory, environmental, and other public health information in standard formats between the computer systems of public health partners.

Description of Existing Capacity:

Secure Electronic Exchange of Data in Standard Formats: Missouri implemented a surveillance information system in 1999 as part of the department's integrated MOHSAIC system. The data model for this surveillance system was shared with CDC and later formed the foundation for the NEDSS base system (NBS) conceptual data model. Missouri is using NEDSS funding to complete the development of key elements.

Data entry is directly into the centralized database through the department's secure WAN. All communicable and vaccine preventable diseases and other reportable conditions are captured in the MOHSAIC surveillance component, the Missouri Health Surveillance Information System (MOHSIS). Multiple conditions reported for a single person are collapsed into a client-centered record to reflect all conditions reported for the client. The record reflects recurrent infections of the same disease and co-morbidity conditions. MOHSIS has provided a number of standard reports for use to review jurisdictional data. The system is capable of creating a downloadable file of conditions reported for an authorized users jurisdiction to use for data analysis. A browser based application for the entry of reportable conditions has been developed and is currently being piloted by infection control staff at a local hospital. Biometrics and PKI technology is currently being tested by DHSS so secure data entry methods can be expanded.
A total of 71 LPHAs have received training on and been given access to MOHSIS.   Plans are to provide this training and access to all LPHAs by mid summer of 2002.

A quality assurance (QA) application has been developed for MOHSIS and is scheduled for implementation to support data de-duplication and data match activities. The infrastructure created to support the QA process is critical for the electronic reporting of laboratory and other surveillance information. Once the QA application is implemented work will be resumed to expand MOHSIS to include STD/HIV/AIDS case entry.

DHSS is developing data visualization capacity for surveillance data using NEDSS funding. This capacity will be expanded in collaboration with Focus Area B to support GIS activities at the regional and state levels.

OIS staff have researched and obtained needed technology to support the receipt of electronic laboratory data. DHSS has volunteered to pilot exchange of data through CDC from the two national laboratories. DHSS has acquired the National Library of Medicines' Unified Medical Language System (UMLS) meta thesaurus for laboratory codes and licenses for the appropriate code sets.

Technical Infrastructure for Data Exchange: Missouri has used NEDSS funds to create needed infrastructure to support electronic data exchange from laboratories and health care providers. Development for Electronic Laboratory Reporting (ELR) is in IBM Websphere MQ Integrator 2.1 messages flow to an Oracle based Undifferentiated Data Store (UDS) for staging, matching, de-duplication, review, and analysis before electronic entry into MOHSIS. Preferred message formats are HL7 3.x (XML) or HL7 2.x. Additional formats will be negotiated on a case-by-case basis, using the "NEDSS HL7 Electronic Lab Reporting Interface Specifications, LabCorp to State Department of Health" as basic data element standards. The internal format of messages in MQ Integrator is XML.

DHSS has tools to develop and use SOAP compliant web services and XML/ebXML messages and transactions through Borland Delphi 6, Microsoft Visual Studio .NET, and Websphere MQ Integrator. OIS staff are currently working with IBM to identify HIPAA Transaction handling in Websphere MQ Integrator.

Assessment of Adequacy of Current Capacity:

Secure Electronic Exchange of Data in Standard Formats: Missouri's MOHSIS system is designed for direct data entry into a centralized database. Data entry is being expanded to include Web based electronic reporting. While this direct entry adequately meets reporting requirements it requires redundant data entry for many mandated reporters. A means to electronically abstract reportable conditions from hospital, laboratory and emergency department computer systems is needed. MOHSIS has successfully reduced the time required by the previous paper reporting system to notify jurisdictions of potential cases. Creating a means to electronically abstract and exchange data will expedite the identification of potential outbreaks and steps to contain the spread of disease. Rapid detection is critical to limiting the impact of outbreaks due to potential acts of bioterrorism.   DHSS has collaborated with the Missouri Hospital Association and a major vendor for laboratory systems to discuss the potential for electronic reporting.

Key is the implementation of national standards to secure the electronic exchange of data. DHSS is researching methods to create capacity for secure, encrypted messaging including biometric authentication and encryption technologies. Various products are being evaluated for an integrated security infrastructure including, IBM Policy Directory & Identity Director, Novell eDirectory/NDS & dirXML, and Microsoft Active Directory Services.

Technical Infrastructure for Data Exchange: Missouri continues to design and create the needed technical infrastructure for data exchange. Missouri believes the infrastructure currently being developed will be adequate to support EDI. At this time it has not been implemented.

Currently, all MOHSAIC applications are multi-tier client/server applications using DCOM interfaces in the middle-tier. Redevelopment will be required to make these applications web-based supporting SOAP web-services.

Proposal for Effecting Improvements with Objectives:

Secure Electronic Exchange of Data in Standard Formats: Missouri proposes to expand the current surveillance information system to include electronic surveillance data. Missouri has initiated the infrastructure needed to accept electronic laboratory reporting of test results. This infrastructure will also support the electronic reporting from hospital and other patient tracking systems.

Objective 1: To enhance DHSS capacity to exchange electronic surveillance and laboratory data using national standards compliant with Appendix 6 IT Functions.

Missouri will accomplish this objective through the following activities.
- Missouri will contract for expert technical consultation on the electronic abstraction and exchange of laboratory data. This expertise is needed to review DHSS's infrastructure plans and assist with defining requirements. DHSS expects to follow the NEDSS laboratory exchange protocols and will implement CDC routing when it becomes available for states not implementing the NBS.
- Until such a time, relationships with individual laboratories and security capabilities will be based upon the highest level of security that can be implemented by each laboratory, hospital, or other agency involved in data exchanges with DHSS.

Technical Infrastructure for Data Exchange: Missouri will implement the technical infrastructure needed to support secure electronic exchange of data. The anticipated increased volume of data necessitates the need to acquire additional hardware and storage capacity. Additional resources to manage both transactional and data warehouse, increased processing requirements, and redundancy requirements are also needed.

Objective 2: To acquire technical staff trained in national standards for electronic data interchange to develop and maintain needed infrastructure.

Missouri will accomplish this objective through the following activity.
- Missouri proposes to acquire additional technical staff and provide training necessary to support MQ Integrator development, MOHSAIC redevelopment for web-based data entry, SOAP, XML, and Microsoft .NET architecture. This includes temporary staff for development and permanent FTEs for development and maintenance.

Objective 3: To implement electronic reporting of public health reportable conditions by hospitals, emergency departments and laboratories.

- Missouri will work with electronic data provided by LabCorp Inc. to initiate ELR.
- Missouri will implement the enhanced capacity required for reporting included in the MOHSIS 2.0 release. This release will expand the current Communicable and Vaccine Preventable Disease reporting capabilities to include the enhanced data de-duplication and other QA tools, NEDSS web-based CD-1 reporting form, and UDS processing.
- Missouri proposes to expand current data warehouse capacity to accommodate the volume of electronic data reported.
- Missouri will continue negotiations of encryption techniques with LabCorp. These will be based upon the CDC ELR Interface Specifications.
- Missouri will continue additional EDI projects under development with health care provider billing clearinghouses and laboratory clearinghouses.
- DHSS OIS staff will collaborate on the expansion of current GIS capacity to support regional and statewide visualization of surveillance and other data. Staff will work closely with the Offices of Epidemiology and Surveillance to assure access to and training on the technology.

Timeline:

May 2002 – Aug 2002	Identify, interview, hire staff, and train staff involved in EDI
May 2002 – July 2002	Develop comprehensive project plan for all IS bioterrorism activities
May 2002 – July 2002	Implement MOHSIS 2.0 and ELR reporting from LabCorp Inc
June 2002 – Dec. 2002	Collaborate with Center for Center for Emergency Response/Terrorism on legal requirements for receiving and distributing data across state lines
July 2002 – Dec. 2002	Develop active hospital surveillance partnership with Missouri Hospital Association
July 2002 – Dec. 2002	Implement ELR with identified national, regional and state public health labs
Jan. 2003 – Aug. 2003	Implement and evaluate an active hospital surveillance reporting and analysis system
Ongoing	Development, consultation, research, and collaboration of related bioterrorism tasks and activities

Measurable Milestones:

- Regular use of system for electronic transmission and receipt of routine and urgent data
- A report evaluating the strengths and weaknesses of these active surveillance systems
- Adequate, trained technical staff to support surveillance infrastructure

Focus Area E: Health Alert Network/Communications and Information Technology
Budget

6a. Personnel $442,704

Computer Information Tech. Specialist I –
5 FTE @ $3,763 X 12 mons $225,780
1 - Directory Administrator
This position will be responsible for activities related to the development, implementation, and continued management of the planned meta-directory.

This individual should possess strong analytical, design, and development skills and possess knowledge of a wide variety of operating systems and database applications.

1- Firewall Administrator
This position will be responsible for design and implementation of DMZ firewall, authentication servers, IDS systems and risk assessment system. Knowledge and skills include TCP/IP based networks and computer system, TCP/IP protocols hardening of host-based security, firewalls, and IDS systems.

1- Data Exchange Administrator -Development
This position will be responsible for developing and managing electronic data exchange efforts between hospitals, health care providers, laboratories and others. It will create needed infrastructure. Knowledge and skills include strong analysis capabilities, good communication, experience in client server environments, object oriented development, web development, source code software management. Skills in relational databases data modeling, and multiple project management.

1- Data Management Specialist
This position will be responsible for managing electronic surveillance data being received by DHSS. Main responsibilities include: data modeling, physical data structure creation, management of logical data model version control, coordinate analysis and design between and among different units. This person is responsible for maintaining the models, running comparison reports to manage model changes, and disseminating information to projects. Knowledge and skills needed: excellent analysis capabilities; experience with data modeling software tools, using and developing relational databases; communications skills commitment to data management principles and data quality practices.

1- Data Exchange Administrator-Technical
This postion will be responsible for design and implementation of an electronic public health information data exchange system. This person requires very broad knowledge of numerous development tools, methodologies, and environments. Knowledge and skills needed: knowledge of various network infrastructures, data exchange standards, variety of data types, and parsing techniques.

24/7 Staff $135,450
Computer Information Technologist l/ll
2 FTEs @ $3,393   X   12 mons $81,432

3 FTEs @ $3,001 X .5 X   12 mons $54,018

Operations staff will be used to provide 24/7 support of all critical applications within DHSS. Duties will include starting and monitoring automated batch routines, alerting support staff during equipment and /or system failures, generating reports, and providing support to users statewide.

Previously Funded HAN Staff $81,474
Theresa Hoelscher CITIII E- Mail Administrator $41,556
Bill Sarver, CITIII - Field Technician .5 FTE $20,778
Mark Mantel, CITII - Help Desk .5 FTE $19,140

These positions help sustain activities initiated during Years 1-3 of HAN. Salaries are for August 31, 2002 - August 30, 2003.

6b. Fringe   **$161,587**

6c. Travel   **$46,500**
In-state Travel
Travel expenses for technicians to upgrade and maintain infrastructure for network including Internet, e-mail, broadcast FAX and two-way video conferencing. Install DSU/CSUs and other needed equipment.

OIS Tech X 3	Staff		Rate/mile	Months		Total
Miles	3	617	$0.335	12		$7,441
Overnight	3	2	$85	12		$6,120
Per Diem	3	3	$55	12		$5,940

Out-of-State
Funds are requested for HAN coordinator and technical staff to travel to national meetings $12,000
and participate in trainings. Funds include meeting registration, meals, and ground and air
transportation

2 Trips X 4 people each X $800 r/t airfare $6,400
4 Days per diem X 4 people X 2 trips X $55 $1,760
3 Nights lodging X 4 people X 2 Trips X $120 $2,880
2 Trips X Ground transportion X $150 $300
Meeting Registration/Fees $660

Funds are requested for the HAN coordinator and technical staff to attend
national stakeholder and other meetings. $15,000

3 Trips X 3 people each X $800 r/t airfare $7,200
4 Days per diem X 3 people X 3 trips X $55 $1,980
3 Nights lodging X 3 people X 3 trips X $120 $3,240
3 Trips X Ground transportation X $150 $450
Meeting Registration/Fees $2,130

6d. Equipment   **$859,310**
Missouri will purchase the needed hardware and software to create a statewide directory
of public health personnel, establish a permanent DSR, create redundant notification
for sending and receiving alerts and emergency communications. Missouri will also
enhance security of the network and expand its capacity for surveillance reporting.

Purchase additional firewall servers with rack, replacement routers, and $232,350
DSU/CSU for enhanced data security, and increase CITRIX capacity.

Purchase METADirectory software and licenses for 5000 seats to support creating LDAP directory of public health personnel and responders.	$260,000
Maintenance contracts and PCs for new FTEs (6 PCs @ $1,500)	$74,790
Purchase 2 certificates for Verisign ($1,200 each)	$2,400
Purchase Emergency Notification System	$103,430
Purchase needed equipment to create permanent Departmental Situation Room (10 PCs, printer, satellite TV, wireless network access, etc)	$20,465
Purchase external power generator and automatic power transfer panel.	$25,200
Purchase Laptops for remote network support	$9,600
Purchase Risk Management Software, server and operating system license (NT).	$88,025
Purchase UPS for central office and remote servers	$19,050
Purchase copies of MS Developers Network universal Software for use by staff working on the exchange of electronic data (10 @ $2,400)	$24,000
	$859,310

6e.   Supplies   **$14,400**
Purchase needed general office supplies and computer supplies for new FTE staff

6f.   Contractual   **$375,000**
Continuation of contracts with Kansas City, St. Louis City and Springfield/Greene County health departments to support Missouri's level "A" Metropolitan Statistical Areas related to emergency response activities. Contracts from 8/31/02 - 8/30/03

Missouri will acquire additional contractors from a vendor previously approved under this agreement (Rose International and Keane). Vendors complete a statewide bid process. The contractors will design, develop and implement the METADirectory to create a statewide personnel directory.

6g.   Other   **$164,090**

Installation of electrical wiring for UPS, wiring of new DSR including intercom between external front door and DSR.	$13,800
Internet connection fee for 1000 LPHA users from 8/02-8/03 (Previous HAN)	$12,000
Provide training to technical staff on SOAP,XML, ASP.net,HTML, Visual Basic.net, MQ Series Integrator, ENS system, VPN concentrator, Firewall Administration, Central Site Router, and RMS.	$78,900
Fee for installation of the VPN Concentrator ($10,000), DSR satellite connections and RMS system.	$20,400

Network fee for connection and support of FTEs (10.5 FTEs @ $2,300 ea) $24,150

Purchase pager services for new FTEs $2,600

Missouri will acquire use of Point of Telephone Service (POTS) T1 lines $12,240
to support the ENS system statewide. (12 @ $1,020)

6h. Total Direct Charges $2,063,591

6i. Indirect Charges (10% of direct charges) $226,609

6j. Total   **$2,290,200**

Page 136 - Add Focus Area E Budget Information (5 of 6 pages).
Financial Information Forms submitted to CDC (hard copy only).

Page 137 - Add Focus Area E Budget Information (6 of 6 pages).
Financial Information Forms submitted to CDC (hard copy only).

FOCUS AREA F: RISK COMMUNICATION AND HEALTH INFORMATION DISSEMINATION (PUBLIC INFORMATION AND COMMUNICATION)

A. Critical Capacity: To provide needed health/risk information to the public and key partners during a terrorism event by establishing critical baseline information about the current communication needs and barriers within individual communities, and identifying effective channels of communication for reaching the general public and special populations during public health threats and emergencies.

(Critical Benchmark #13: "Develop an interim plan for risk communication and information dissemination to educate the public regarding exposure risks and effective public response.") See Benchmark #13 in Benchmark Section.

Description of Existing Capacity:

The Missouri Department of Health and Senior Services (DHSS) is committed to the objective of providing needed health/risk information to the public and key partners during a terrorism event. The 100-year flood the state experienced in 1993 was a reminder to the department of the critical importance of providing clear, concise and effective information to the public. Following that experience, the department updated its emergency response plan, which already included a strong role for public information professionals, to be an all-hazards plan. When the nation began to discuss the threat of bioterrorism in the late 1990s, the department paid attention, and in 2000 began another major rewrite of the plan to allow a focus on terrorism response. One of the chapters of the plan was devoted to public information, and many of the issues raised during the development of that chapter are included in the "Interim Plan for Risk Communication and Information Dissemination." See Critical Benchmark #13 in the Benchmark Section.

Current resources for providing needed health/risk information to the public and key partners during a terrorism event include an Office of Public Information, which is lead by the Chief, Office of Public Information, and assisted by two Public Information Coordinators. The bioterrorism communications assignment is in addition to regular duties of communicating public health and senior services information to the public. Additional individuals have been targeted for communications functions during an event (see Interim Plan in Critical Benchmark #13, page 42).

Current capacity for providing needed health/risk information to the public and key partners during a terrorism event at the local level varies from an assigned public information officer at a handful of the large local public health agencies, to the majority situation, which would require the local public health agency administrator, a health educator, or another assistant to develop messages and deliver information to the public, as well as all his or her other duties.

Assessment of Adequacy of Current Capacity:

The interim communication plan (Critical Benchmark #13) provides the framework for how the department will collaborate with other state, local and federal agencies to get critical information to the public in the event of a terrorism attack or other public health threat. A number of recommendations were noted during the development of the plan that address and describe the capacity that exists at the state and local levels to communicate adequately. These recommendations help to describe the department's readiness to communicate during a crisis as well as needed improvements. Areas in which improvement is needed include:

- Training at the state level. The department needs to provide emergency response/bioterrorism media training and risk communication training for staff given public information responsibility in Jefferson City and district offices.

- Training at the local level. The department should provide emergency response/bioterrorism media training and risk communication training for staff in local public health agencies.
- Capacity to receive and respond to citizens' questions. The department needs to develop hotline procedures, including training, staffing and developing the mechanics.
- Using the web site as a tool to inform. The department needs to develop a targeted bioterrorism web page that will provide up-to-the-minute information as a resource to many different audiences—the general public, local public health agencies, health care providers, first responders, the education community, et. al.
- Language issues. The department needs to address language needs statewide and at the local levels.

Local public health agencies also describe a lack of capacity to effectively communicate with their community members. The needs assessment that will be developed and administered as part of this cooperative agreement will identify areas in which local public health agencies lack capacity; however, it has been noted in previous communicable disease outbreaks and other situations that many local health agencies lack sufficient personnel trained to work with the media and to deal with a crush of media attention.

In order to accomplish the critical capacity as outlined in this cooperative agreement, DHSS needs a Public Information Administrator dedicated to working with the issue of bioterrorism. The Administrator, working through regional positions established by the department, will coordinate bioterrorism public information efforts at the state and local levels, oversee training offered by the department, coordinate bioterrorism public information preparation activities among other state agencies, and communicate with adjacent states to ensure messages are coordinated and consistent.

These are all issues of capacity that will be addressed as part of this work plan.

Proposal for Effecting Improvements with Objectives:

Objective 1: To determine state and local readiness to provide risk communication and public information during a terrorism event or other public health threat and to identify specific areas for improvement.

Needs Assessment: The Office of Public Information will develop and implement a needs assessment, which will be a written questionnaire delivered to all 114 city and county public health agencies and to appropriate sections of DHSS. Follow-up interviews will be conducted as necessary. The results will be compiled and shared with respondents. Subject areas for the needs assessment will include capability of developing and delivering messages, training needs of spokespeople, what methods can be used to deliver messages, which audiences need to be reached, and what supplies and/or technology are needed to support risk communication/public information efforts. The findings will be used to guide the specifics of training, coordinating information, developing appropriate messages, providing translation of materials and other activities discussed in this work plan.

Advisory Committee: As outlined in Focus Area A, there will be an Advisory Committee on Risk Communication/Public Information to consult on ongoing needs to meet this area's critical capacity, as well as to provide feedback on specific objectives.

Objective 2: To increase capacity of state and local public health agencies to provide risk communication and public information during a terrorism event or other public health threat.

Training: Using capacity information gathered in the needs assessment, the department will hire a contractor to develop and deliver training on risk communication, media relations and media outreach to

individuals who are designated to be spokespeople at the state and local levels. The training will be offered to each region at least annually, and at the state level at least once each quarter. The contractor may utilize and adapt bioterrorism risk communication training that is being developed by the Centers for Disease Control and Prevention's Office of Communication, which is a "train the trainer" curriculum. Training will include on-camera practice and critique for spokespeople. The Missouri Department of Health and Senior Services' bioterrorism public information administrator will coordinate and assist in trainings and follow-up practice activities, as well as work with state and local public health agencies to identify spokespersons to be trained. The administrator also will offer the training sessions to public relations staff from hospitals around the state. The administrator will coordinate these activities with the Office of Training and Professional Development and the Center for Emergency Response/Terrorism.

Contracts for bioterrorism public information positions: The DHSS will contract with the local public health agencies that serve the largest populations in the state -- St. Louis City, St. Louis County, Kansas City and Springfield – to fund a public information coordinator at each site. The public information coordinators will coordinate their activities closely with the DHSS Public Information Administrator. The state's HAN grant has previously funded half-time public information positions in St. Louis City, Kansas City and Springfield; these new contract funds will add to the half-time positions and fund a full-time position.

Annual bioterrorism conference: The annual bioterrorism conference (as outlined in Focus Area A) will include at least one topic on risk communication and/or bioterrorism public information.

Technical Support: The Office of Public Information could be displaced as a result of a terrorism attack, or could need to travel to a local site of a terrorism event. For that reason, the office has created "Go-kits," and will purchase equipment that will allow the office to communicate vital health information to the public from any location, without dependence on telephone or data lines. Additional equipment and technical improvements as outlined in the budget will allow the department to provide risk communication and public information during a crisis, as well as print and video materials and trainings during or in advance of a crisis.

"Go-kits" for local public health agencies: The Office of Public Information will coordinate the development of "Go-kits" for local public health agencies. The kits will include items the agency would use to communicate with the public during a crisis situation, including media lists, draft news releases, steps for producing additional news releases, fact sheets, etc. Agencies would be encouraged to add their own items, as needed.

Objective 3: To address individual citizens' concerns during a terrorism event or other public health emergency.

Hot line: The Office of Public Information will hire a contractor to coordinate the development of a DHSS hotline that will be activated immediately if a suspected terrorism event should occur in the state or nation. Capacity issues for the hotline include adequate numbers of incoming lines, adequate numbers of personnel to staff the hotline, adequate training for personnel, development of appropriate messages/scripts, appropriate promotion of the hotline number, and how to coordinate the hotline with local efforts.

Web site: The Department of Health and Senior Services will hire a contractor to design a bioterrorism web page as part of the department's web site, as well as provide a bioterrorism web site coordinator to maintain the site, work with staff to develop materials, and immediately upload information during a terrorism event. The bioterrorism web page will be designed to target audiences with specific information. Target audiences will include the general public, health care providers, other public health professionals, first responders, local government officials and other audiences. The contractor will also develop a secure

web page for exchange of confidential information between the department and local public health agencies and health providers. The web site must be capable of being updated at least every two hours as needed during an event. In advance of an event, the site will contain general information on bioterrorism as appropriate for the different target audiences.

Objective 4: To provide access to information resources.

Review/adapt existing materials: The department will hire a contractor who will work with the Bioterrorism Public Information Administrator to review existing information and materials on bioterrorism and adapt appropriate materials for use in Missouri. These materials will be shared with local public health agencies and other partners for their use.

Prepare fact sheets/news releases: The contractor, in consultation with the Public Information Administrator, will draft basic fact sheets and news releases that could be used in a terrorism event. The contractor will ask representatives of local public health agencies and news media to review the draft fact sheets and news releases for clarity and appropriateness. These materials will be shared with local public health agencies.

Translate basic materials into other languages: The Public Information Administrator will survey local public health agencies to determine into which languages terrorism materials should be translated. The Administrator will arrange with a contractor to have basic materials translated into appropriate languages. The Administrator will share these translated materials with local public health agencies.

Coordinate messages with other partners: The Office of Public Information will develop an e-mail list of public information contacts for appropriate partners, including local public health agencies, other state public health agencies in neighboring states, hospitals, federally qualified health centers, disaster assistance organizations, volunteer organizations and other state agencies. At least once monthly the Public Information Administrator will communicate with individuals on the list to give an update on activities, as well as to share materials and messages.

Timeline:

May 15 – June 15, 2002:	Develop job description, interview materials for Public Information Administrator
May 15 – June 15, 2002:	Develop needs assessment and disseminate electronically
June 2002:	Appoint members of Risk Communication/Public Information advisory committee
June 5 – 6, 2002:	Annual bioterrorism conference
June 15 – July 30, 2002:	Interview and select Public Information Administrator
July 1 – July 31, 2002:	Conduct follow-up interviews for needs assessment
July 2002:	First advisory committee meeting
July 1 – Sept. 30, 2002:	Develop RFPs for contracts: risk communication/media relations training; hotline; bioterrorism web site; material review
Oct. 1 – Nov. 30, 2002:	Select contractors
Dec. 1 – 31, 2002:	Develop protocols for hotline
Dec. 1, 2002 – Mar. 31, 2003:	Contractor begins reviewing existing bioterrorism information; develop and test basic materials
Feb. 1, 2003:	Begin regional and state training sessions for risk communications
Mar. 1, 2003:	Begin training for hotline spokesperson designees
April 1 – May 31, 2003:	Contractor translates basic materials into identified languages

June 2003:   Regional tabletop exercises to include tests of regional/local risk communication plans

July 2003:   Department tabletop exercise to include testing of risk communication plan

Aug. 2003:   Full-scale, statewide exercise that will include testing of risk communication efforts

Measurable Milestones:

The following activities will be used to evaluate the objectives in the work plan.

- Follow-up needs assessment: The Office of Public Information will conduct a follow-up needs assessment one year after the original assessment to determine improvements in the state and local public health agencies' capacity to provide risk communication and health information to the public during a health emergency. The needs assessment specifically will address what improvements resulted from activities undertaken by this cooperative agreement, and will identify continuing or emerging gaps.
- Advisory Committee Consultation: The Risk Communication/Public Information Advisory Committee members will be asked to provide input concerning the impact of work-plan activities as well as recommendations for new activities or improvements in continuing activities.
- Evaluation of risk communication trainings: Each risk communication/public information training session will include evaluations of the session by participants. These evaluations will be used to guide changes in content, delivery and logistics of the training sessions.
- Exercises: The risk communication plan will be tested as part of table top and other exercises that test all aspects of the state and regional plans.
- Media surveys: The Office of Public Information will conduct surveys of media members to determine whether bioterrorism education and information materials meet their needs, and are understandable, compelling and appropriate.

Focus Area F: Risk Communication and Health Information Dissemination
Budget

Salaries for 2 FTE
Public Information Administrator (1 FTE)
  Salary $48,000

Bioterrorism web page coordinator (1 FTE, located in OIS)
  Salary $38,000

Total Salary   **$86,000**

Equipment, furniture, computers, etc.   **$44,960**

Fringe/Indirect   **$75,411**

Contracts with LPHAs for Public Information Specialists (4 contracts)
  Salary $39,048
  Fringe/Indirect 25% $ 9,762
  Travel $ 5,000
  Equipment/Furniture, etc. $ 4,380
Total LPHA Contracts   **$232,760**

Total Travel for FTEs   **$10,000**

Needs assessment (including follow-up and on-site visits)   **$ 3,000**

Risk Communication Advisory Committee
  Travel, meeting expenses, etc. for at least four   **$ 5,000**
  meetings per year

Training
  Contractor to develop training $20,000
  Contractor to deliver a minimum of 13 trainings $32,500
      per year
  Travel for participants $10,000
Total Training   **$62,500**

Technical support
  Equipment for mobile communications capabilities $68,550
  (see attached)
  Video editing equipment $12,000
  Upgraded computer equipment $ 4,000
      (for desktop design of materials)
Total technical support   **$84,550**

Go-kits for local public health departments   **$10,000**
    (development, materials)

Telephone Hotline   **$40,000**
    Contractor to develop protocols, draft scripts,
        conduct trainings,

Bioterrorism web site   **$150,000**
    Contractor to develop bioterrorism web pages
        for target audiences (up to six)
    Contractor to develop secure site
    Contractor to match sites to overall department design

Risk Communication materials
    Contractor to review existing materials, develop $150,000
        materials for use in a crisis, test messages for
        effectiveness and appropriateness in Missouri;
        materials will include draft fact sheets, news releases
        family safety booklets, etc.
    Production of materials $100,000
Total Risk Communication Materials   **$250,000**

Translation of materials   **$30,000**
    Contractor to provide translation services

TOTAL FOCUS AREA F   **$1,084,181**

Page 145 - Add Focus Area F Budget Information (3 of 4 pages).
Financial Information Forms submitted to CDC (hard copy only).

Page 146 - Add Focus Area F Budget Information (4 of 4 pages).
Financial Information Forms submitted to CDC (hard copy only).

FOCUS AREA G: EDUCATION AND TRAINING

A. Critical Capacity: To ensure the delivery of appropriate education and training to key public health professionals, infectious disease specialists, emergency department personnel, and other healthcare providers in preparedness for and response to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies, either directly or through the use (where possible) of existing curricula and other sources, including schools of public health and medicine, academic health centers, CDC training networks, and other providers.

(Critical Benchmark #14: "Prepare a timeline to access training needs—with special emphasis on emergency department personnel, infectious disease specialists, public health staff, and other health care providers.") (See Critical Benchmark#14 in Critical Benchmarks Section).

Description of Existing Capacity:

State and Local Public Health System: Currently at the local public health level many of the rural public health agencies depend on DHSS to provide training related to bioterrorism and public health emergencies, infectious diseases and epidemiology. The larger metropolitan areas, in some cases, provide their own training related to bioterrorism, public health emergencies, infectious diseases, and epidemiology. However, at both the local and state levels existing staff that has other full time duties provide all training.

Hospital staff in the State of Missouri receives basic training in disaster planning and preparation. At this time some hospital staff have received limited training in weapons of mass destruction, including bioterrorism. Again, existing staff with other full time duties has provided the training and education. In addition some education has been provided through conferences and specialized sessions provided by professional organizations and academic institutions.

Professionals at the local level, such as infectious disease specialists and nurses, family care physicians, emergency department doctors, and other health professionals, have been offered training related to weapons of mass destruction, including bioterrorism, intermittently. Again, the resources dedicated to the topic have come from existing staff that have other full time duties or through conferences and other specialized training provided by professional associations and academic institutions.

At this time there is not adequate capacity to provide training to professionals in the public health system.

Current Technology Available for Training and Education: The success of future training and education will rely heavily on the use of training methods that go outside of the traditional face-to-face programs. The state of Missouri public health system has been fortunate to currently have a solid base of technology to use in distance learning teaching methods, which are listed below.
- 29 satellite downlinking sites within the state and local public health system (see map attached).
- Satellite uplinking capabilities through the Missouri Department of Elementary and Secondary Education.
- 6 Video conferencing sites within the state and local public health system (see map attached).
- Intranet capabilities including secure video conferencing.
- 129 computer based training (CBT) courses available to local public health and DHSS staff.

Assessment of whether the current capacity is adequate

Current capacity is not adequate at either the state or local public health level to meet the necessary training capacity for bioterrorism preparedness planning and readiness. At both the state and regional levels,

bioterrorism and public health emergency training and education has occurred on a limited basis with existing resources and usually in addition to the original responsibilities of staff. Training on a regional level has not occurred and a training plan has not been implemented at the state or regional level to assure suitable training is being delivered to the appropriate public health professionals.

The needs assessment that will be developed and administered as part of this cooperative agreement will identify areas in which the state and local public health system lack capacity and content related to public health emergencies and terrorism (see Critical Benchmark #14, Critical Benchmarks Section for timeline). The assessment, which will be administered by a contract organization, will assist in determining what education or training content will be needed, what methods of training to use for the targeted group or profession (i.e. satellite, phone conferencing, CBT, etc.), and mandating members of the public health system to attend training and educational sessions.

These are all issues of capacity that will be addressed as part of this work plan.

Proposal for Effecting Improvements with Objectives:

A training improvement plan for public health emergencies will be addressed through an assessment of the state and regional public health system. Dependent on the assessment a training plan will be created and activated to educate and train the workforce on public health emergencies, including bioterrorism, decision making in a crisis, and technical issues, such as epidemiology and Geographical Information Systems (GIS).

The capacity for training will be expanded for public health emergencies by adding a staff member to the Center for Emergency Response/Terrorism. A Health Program Representative (HPR) will be added to coordinate training at the regional level for the preparedness system. The coordination will include training and education for public health professionals, the general public such as civic groups, and management and planning. The HPR will also coordinate and plan all regional exercises and assure details and activities for all exercises have been addressed, including coordination with regional organizations and hospitals.

There is one full time Distance Learning Coordinator (DLC) for the public health system at the state and regional level. This staff member was previously funded by the Health Alert Network (HAN) but will now be funded by this Focus Area. The DLC will be co-rated by the Chief, Office of Training & Professional Development and the Assistant Director of the Center for Emergency Response/Terrorism. This staff member will be devoted to scheduling and advertising distance learning programs in DHSS, advertising appropriate programs to the regional public health system, identifying suitable distance learning programs for use by state and regional public health system professionals, and production and coordination of distance learning programs produced by DHSS.

Objective 1: To determine state and local public health training and education needs through a statewide assessment of the public health system in regards to public health emergency management especially related to bioterrorism.

Needs Assessment: The Center for Emergency Response/Terrorism will contract with an organization to complete an assessment of training needs and capacity at the state and local public health levels. The assessment will specifically target each group identified, for example, family physicians, infection control professionals, public health professionals, etc. The date will be used to identify a statewide training plan related to public health emergencies including bioterrorism. (See Critical Benchmark #14, Critical Benchmarks Section, for timeline.)

Objective 2: To develop a training plan for the state and local public health system to respond to a public health emergency including bioterrorism.

Advisory Committee: As outlined in Focus Area A, there will be an Advisory Committee on Education and Training to consult on ongoing needs to meet this area's critical capacity, as well as to provide feedback on specific objectives.

Training of new regional and state staff: Provide public health emergency training, including bioterrorism, to new state and regional staff proposed by this cooperative agreement as outlined in Focus Area A and Focus Area B. New staff for Focus Area A will require training in management, leadership, and principles of public health practice. New staff in Focus Area B will need training in surveillance, Principles of Epidemiology, Biostatistics and more advanced applied epidemiology training, as well as bioterrorism specific content. These staff members will also require epidemiology tools including data analysis methods and Epi Info computer software. The staff will receive training immediately upon being hired in order for them to begin working toward the goals and objectives of the cooperative agreement.

Epidemiology: In order to create depth and capacity at the regional level DHSS will provide four more courses of Principles of Epidemiology in the next year. This is in addition to the three programs that are normally provided. The course will be used to create back up and increased capacity at the regional level. At this time, only one staff member at the local public health agency level is required to have attended this course, leaving the agency vulnerable if that person is not available during a public health emergency. The Office of Training and Professional Development and the Division of Environmental Health and Communicable Disease Control will coordinate the courses in cooperation with the Center for Emergency Response/Terrorism.

In addition to the Principles of Epidemiology course, advanced surveillance and epidemiology public health training is needed for regional staff, including local public health agency staff, medical care providers, and other participants in the surveillance effort. Funds will be used to cover expenses for participants to attend training normally taught by CDC in Atlanta, Georgia and the St. Louis University School of Public Health. Two courses will be taught instate at selected locations proximal to the attendees. The course will provide depth and needed education to the Missouri Public Health System.

Regional Exercises: Regional tabletop exercises and a DHSS tabletop exercise will be conducted yearly. A simulated statewide exercise will be conducted once a year. Each exercise will be evaluated and the regional plan will be updated as necessary.

National Pharmaceutical Stockpile (NPS) Exercises: Two NPS exercises will be conducted yearly. One exercise will be in a rural location and the second in a metropolitan area. See Focus Area A for details.

Annual public health emergency/bioterrorism conference: A public health emergency/bioterrorism conference will be offered annually. The conference will cover topics related to planning, NPS, agents and treatment, surveillance, etc. The conference will be offered in a central location in order to be available to all targeted audiences in the state. The Health Program Representatives in the Center for Emergency Response/Terrorism will coordinate this effort.

Regional Rapid Response Team Training (RRDRT): The RRDRTs are described in Focus Area B. The RRDRTs will require training on the public health system and how it interacts with other partners, such as infectious disease units, family care physicians, and hospitals. The RRDRTs will also receive training on bioterrorism-specific content.

Decision Making and Team Crisis Training: Missouri DHSS will coordinate with an academic institution to deliver training related to teams working in a crisis and how to make quick and appropriate decisions in a crisis. Training will be provided on a state and regional level. This activity will be coordinated through the Office of Training and Professional Development and Center for Local Public Health Services in cooperation with the Center for Emergency Response and Terrorism.

Education for family physicians, infection control professionals, emergency department personnel, health center professionals, first responders and other related professions: DHSS will determine what programs are needed and what formats education and training should be presented for the above group. After determination DHSS will contract with educational institutions to develop and provide training for the above groups on bioterrorism and public health emergencies. The Medical Consultant described in Focus Area A and a representative from the Missouri Hospital Association will counsel the contracted university to assure course content is acceptable according to the guidelines established by DHSS.

Technical Training: Technical training will be provided to GIS management and staff. Training will be required for three staff members for new GIS software purchased by this cooperative agreement (see Focus Area B).

Objective 3: To increase the technical abilities of the state and regional public health system for distance education/training.

The Missouri state and regional public health system currently has 29 satellite dishes (see map attached). As indicated by the map there are several areas that do not have a satellite site located geographically convenient in the public health regions. An assessment of which local public health agencies would benefit from a satellite dish has been conducted and a total of 45 more local public health agencies are requesting the equipment. Over the next three years all of the local public health agencies that have requested satellite equipment will receive funding to purchase the equipment. During this cooperative agreement up to ten contracts will be given to local public health agencies with the most need.

The current satellite sites in the public health system only have analog receivers. In order to coordinate with the Missouri Department of Elementary and Secondary Education (DESE) digital receivers must be phased in over the next two years. DESE provides DHSS with the ability to broadcast satellite programs for training and in public health emergencies, therefore our systems must remain compatible.

Video conferencing equipment and software will be enhanced to give DHSS the ability to utilize video communications via TCP/IP and ISDN connections. ISDN will be utilized to offload video traffic from DHSS' network. The ISDN connections will also provide a secure method of communication utilizing the public switched telephone network, bypassing the DHSS IP network.

The system enhancement will allow increased numbers of participants in videoconferences. Simultaneous multipoint conferences will also be possible with this system. In addition the system enhancement will allow videoconferences with Internet attached video units. The system will also allow data collaboration; sharing of documents, such as spreadsheets and word processing; manipulation of documents; and viewing of changes in real time. This will provide the ability of participants in a videoconference dispersed over a geographic area to develop official documents quickly in response to a public health emergency, including a bioterrorism incident.

The video conferencing administrator, previously supported by the Health Alert Network Grant, will now be supported in this Focus Area. The video conferencing administrator will manage, schedule, and coordinate videoconferences with the MCU administration software.

Objective 4: To increase the distance learning capacity.

Multiple formats of education and training will be needed in order to reach all audiences addressed in this cooperative agreement. In order to increase distance learning capacity, a contract will be put in place to develop needed programs. The contract may include software and development time.

Timeline:

May – June 2002	Develop job description and establish position of Health Program Representative.
June 2002	Determine what organization will be conducting the assessment.
	Annual Bioterrorism Conference
July – Aug. 2002	Create assessments to target each group and determine how assessments will be administered, for example, paper copy, focus groups, phone interviews.
	Identify members of the advisory committee, which will meet at least three times a year.
Sept. 2002	Administer assessments.
	Begin training new staff in state and local offices as hired
	Regional NPS training sessions
Oct. – Nov. 2002	Analyze data from assessments and distribute.
Nov. – Dec. 2002	Determine contract organizations to develop training according to needs assessment for local public health agency professionals, family physicians, infection control staff, emergency department staff, etc.
January – March 2003	Develop training for groups mentioned above.
January – August 2003	Deliver four Principles of Epidemiology courses
February 2003	Metropolitan NPS exercise
April – August 2003	Deliver training to various groups named above.
	Deliver Advanced Epidemiology Sessions
June 2003	Regional tabletop exercises
July 2003	DHSS statewide tabletop exercise
August 2003	Simulated statewide exercise.
	Rural NPS exercise

Measurable Milestones:

The following activities will be used to evaluate the objectives in the work plan:

- Follow-up needs assessment: The Center for Emergency Response/Terrorism will conduct a follow-up needs assessment one year after the original assessment to determine improvements in the state and local public health system's education and training related to bioterrorism and public health emergencies. The needs assessment specifically will address what improvements resulted from activities undertaken by this cooperative agreement, and will identify continuing or emerging gaps.
- Advisory Committee Consultation: The Education and Training Advisory Committee members will be asked to provide input concerning the impact of workplan activities as well as recommendations for new activities or improvements in continuing activities.
- Evaluation of education and training: Each education and training session will include evaluations of the session by participants. These evaluations will be used to guide changes in content, delivery and logistics of the training sessions.
- Each region and DHSS will have had a tabletop exercise yearly. A statewide simulated exercise with all Missouri departments and regions will be held yearly. After-action reports will be required, and the plans will be updated and improved as needed.

Focus Area G: Education and Training
Budget

Personnel

Training Technician III $40,000
     (distance learning coordinator)

Video Conferencing Technician $41,556

Health Program Representative III $39,048

Total Personnel   **$120,604**

Travel   **$15,000**

Total Fringe and Indirect   **$105,754**

Needs Assessment   **$125,000**
The needs assessment will assist in determining what
courses will be offered and to what health care groups.

Training of New Staff   **$100,000**
This includes all new staff in previous Focus Areas
and the new LPHA staff.

Principles of Epidemiology Course (4 sessions)   **$40,000**

Advanced Epidemiology Course (2 per year)   **$100,000**
This course will be through CDC and Saint Louis
University School of Public Health as described in
Focus Area B.

Regional Exercises   **$50,000**
Includes all materials and copying for the exercises.

National Pharmaceutical Exercises (2 per year)   **$62,000**
Includes all materials and copying for exercises, name
tags, consultation, etc.

Annual Terrorism Conference   **$55,000**

Regional Rapid Response Team Training   **$125,000**
Includes epidemiology course and simulated training
as needed.

Team Crisis Training   **$35,000**
DHSS will work with the Saint Louis School of Public
Health School of Public Health's Heartland Center to
deliver this training to needed teams in the regions and for
DHSS staff.

Technical Training $120,000
GIS training for 3 staff members described in Focus Area
B for new GIS software.

Academic Institution Contracts $250,000
Contracts will focus on health care professional groups
such as, infection control professionals, local public
health professionals, family care physicians, etc.

Distance Learning Capacity $125,000
Contractor will be hired to produce at least two computer or
web based courses before August 2003.

Satellite Dishes (45) $36,940
Contracts will be established to provide satellite equipment
for 45 LPHAs in the state requesting one.

Digital Update for DHSS satellite Dish $2,500

Digital Update for LPHAs (10 sites) $22,500

Travel for Training Sessions $100,000

Upgrade Video Conferencing $330,816
Increase distance learning capacity.

Training Tracking Electronic System $126,000
Contractor will develop an electronic training tracking
system that will be available to LPHAs and DHSS.

Multi Media Projector $7500
To be used for training sessions and Disaster Situation
room during an event.

Office Supplies $10,000

TOTAL FOCUS AREA G $2,064,614

Page 154 - Add Focus Area G Budget Information (3 of 4 pages).
Financial Information Forms submitted to CDC (hard copy only).

Page 155 - Add Focus Area G Budget Information (4 of 4 pages).
Financial Information Forms submitted to CDC (hard copy only).